NEW EQUIPMENT DIGEST

A Penton Publication

December, 1958

Volume 23—Number 12

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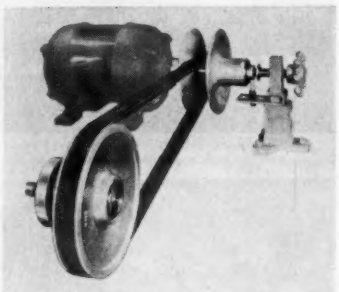
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 16 and 80

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

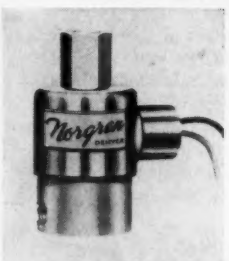
VARIABLE SPEED SHEAVES
wide belt type have fixed centers



Capacities of 1 to 3 hp and speed change ratios as high as 8:1 are available in line of smooth-faced variable speed sheaves. They operated on fixed centers and employ 1 3/16-in. wide V-belts. The controllable sheave is mounted on the motor and the spring-actuated sheave is mounted on the shaft of the driven machine. Factory lubricated sintered bronze bushings and automatic belt alignment are incorporated. With a 1750-rpm motor, a speed range of 400 to 3200 rpm can be obtained at the driven shaft. Made by **Speed Selector Inc.**, Box 312, Chagrin Falls, Ohio.

▲ For more details circle **NED-1 M8** on enclosed inquiry slip ▲

SOLENOID VALVES
two and three-way directional types



Suited for air, oil, cold and hot water, and gas use, the first solenoid valves offered by this company can be operated at up to 600 cycles per minute. Models in two series have an operational temperature range of −20 to 200° F ambient and −20 to 175° F media. Series A units include two and three-way and directional types, both normally-closed and normally-open. They have a stainless steel body or a brass body with a stainless steel seat insert. Pipe sizes are 1/8 and 1/4 in. Grommet or conduit type electrical outlets are offered. Series B midget, two-way normally-closed valve with 1/8-in. ports has a brass body with stainless steel seat insert and grommet type electrical outlet. All models can be serviced without removal from the line, have splash-proof housings, and will operate in any position. Coils are available for all common alternating and direct current voltages. Made by **C. A. Norgren Co.**, 3400 S. Elati St., Englewood, Colo.

▲ For more details circle **NED-2 M8** on enclosed inquiry slip ▲

FORK LIFT TRUCKS
capacities to 40,000 lb

Standard lifting heights for three models of Gerlinger H Series fork lift trucks are from 10 to 20 ft. The heavy duty trucks for handling steel and concrete products, lumber, and timber have capacities of 32,000, 36,000, and 40,000 lb. The latter unit is illustrated. All are powered by a Continental six-cylinder, 170-hp engine, with a Continental diesel engine optional. Torqmatic power shift transmission (standard) gives full power flow under all operating conditions. The pivotal steering axle is actuated by a hydraulic power booster. Available from **Towmotor Corp.**, 1226 E. 152nd St., Cleveland 10, Ohio.

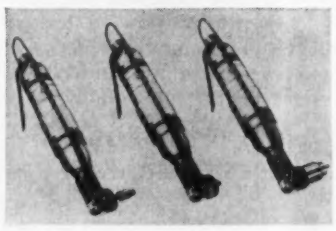
▲ For more details circle **NED-3 M8** on enclosed inquiry slip ▲

PRESSURE CONTROL
explosionproof unit has 21 ranges

Designed for use where space and weight are important factors, this pressure control is Underwriters' Laboratories - listed for Class 1, Group C and D, and Class 2, Group E, F, and G (NEMA 7-9, 9A) service. It has external adjustments for setting the operating range, visible calibrated dial, visible hermetically sealed mercury switch, and 1/2-in. external and 1/4-in. internal pressure connections. Control is suited for surface or panel mounting and is available with breather or drain. Twenty-one operating ranges from 0-30 in. vacuum to 0-1000 psi are offered. Size is 5 x 7 3/4 x 9 7/8 in. and weight is 8 lb. Made by **Mercoid Corp.**, 4201 Belmont Ave., Chicago 41, Ill.

▲ For more details circle **NED-4 M8** on enclosed inquiry slip ▲

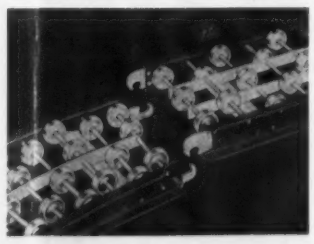
ANGLE AIR TOOLS
for drilling and fastener driving



Series of Keller air tools includes angle drills, nut setters, and screwdrivers, all designed for minimum clearance applications in assembly work. They have ball bearings, Zerol bevel gears, and splined drives. Each tool is offered in five sizes with speeds ranging from 3200 rpm for the smallest to 450 rpm for the largest size. The 12L-2 screwdriver at left handles screw sizes from No. 6 to 1/4 in. The 16L-2 nut setter in the center ranges in capacity from No. 6 to 1/4-in. machine nuts, and the 11L-2 5/32-in. capacity tool at the right is offered with a standard right-angle drill attachment. Optionals are a 45-degree angle attachment and right-angle attachments with single and double drivers. Made by **Gardner-Denver Co.**, 1350 Front St., Quincy, Ill.

▲ For more details circle **NED-5 M8** on enclosed inquiry slip ▲

GRAVITY WHEEL CONVEYORS
in 5 and 10-ft lengths



Added to line of materials handling conveyors and systems, line of ball bearing gravity wheel conveyors provides straight lengths of 5 and 10 ft. Widths of 12, 15, 18, and 24 in. are offered. Curved sections are made with 33 and 15-in. inside radii, in 90 and 45-degree angles. Spur switches, Y-switches, spur curves, guard rails, and gate sections are also available. Made by **Conveyor Specialty Co.**, 33 Newport Ave., North Quincy, Mass.

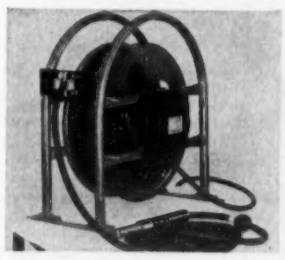
▲ For more details circle **NED-6 M8** on enclosed inquiry slip ▲

FLEXIBLE GEAR COUPLING
operates at up to 5000 rpm

Ten bore sizes ranging from 7/16 to 1 5/8 in. are available in the Nyflex lightweight gear coupling, a non-lubricated, flangeless, flexible unit with a one-piece nylon sleeve. It weighs only 3 1/2 lb and will operate over a wide temperature range at up to 5000 rpm. It can take misalignment of nearly 5 deg and will absorb both angular and parallel misalignment and end float with a minimum of backlash. An 800-hr test showed no sign of wear at total misalignment. Made by **Sier-Bath Gear & Pump Co.**, 9242 Hudson Blvd., North Bergen, N. J.

▲ For more details circle **NED-7 M8** on enclosed inquiry slip ▲

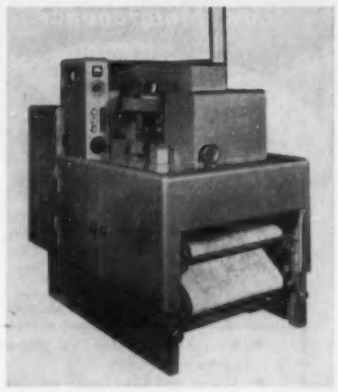
SELF-RETRACTING REEL
holds 50 ft of 2/0 welding cable



Equipped with a heavy-duty retracting spring, the Weldreel Model EA2 will hold 50 ft of 2/0 welding cable and has current capacity of 300 amp with 60 per cent overload factor. Cable pays out easily to required length and is held by locking pawls. Releasing the pawls by means of a slight tug on the cable allows spring to rewind the cable. Unit has welded tube frame and can be easily mounted on walls, floor, ceiling, or mobile equipment. Entire mechanism is insulated from end support brackets. Ball bearing and spring are lifetime lubricated. Four graphite brushes maintain full load contact with copper armature. Made by **United Specialties, Inc.**, Box 698, El Dorado, Ark.

▲ For more details circle **NED-8 M8** on enclosed inquiry slip ▲

MICROFILM PRINTER
operates continuously from tab cards



Printed material is automatically turned out at the rate of 20 fpm by the Copyflo 24 continuous xerographic printer, reproduced from tabulating cards which hold a single frame of film. The near - instantaneous copying process reproduces from microfilm onto plain, unsensitized paper. Dry black - and-white prints that are photographically accurate are turned out up to 24 in. wide. A unitized microfilm system combines the equipment of several manufacturers in copying original drawings and tracings onto microfilm and automatically mounting the processed film frames into die-cut apertures of data-processing cards. The Xerox Copyflo machine utilizes a 2000-ft roll of plain white paper, vellum, or offset paper master stock. Machine is sold or leased by **Haloid Xerox Inc.**, 2-20 Haloid St., Rochester 3, N. Y.

▲ For more details circle **NED-9 M8** on enclosed inquiry slip ▲

no UPS and DOWNS

IF YOU HOLD YOUR WORK IN A

Zagar COLLET INDEXING FIXTURE

In Addition: Save Special Tooling—Speed Job Setups—Simplify and Save On Your Small Parts Production . . .

Zagar collet indexing fixtures, in 1" and 2" capacities, are adapted to slot milling, straddle milling, drilling, tapping, and grinding. Zagar collet fixtures are known for their rigid holding. No vertical movement of work pieces, no chatter or vibration, no annoying movements which contribute to imperfect work. Zagar collet fixtures keep accurate production up—keep scrap piles down.

Write for Data Sheets 12-12-N.

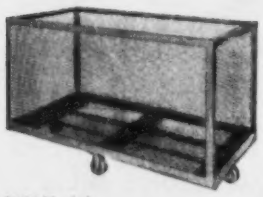
ZAGAR, INC. • 23880 Lakeland Blvd., Cleveland 23, Ohio

Zagar TOOLS FOR INDUSTRY and SPECIAL MACHINERY

For more details circle NED-10 M8 on enclosed inquiry slip

UNIVERSAL

EXPANDED METAL FLOOR TRUCKS



MODEL 4-A
Length 60", width 30", height 30".

MODEL 4-B
Length 60", width 30", height 48".

- Greater Economy
- Greater Utility

Literature Mailed Promptly Upon Request

Durable, highly maneuverable, economically priced. Designed to meet a wide range of material handling jobs. Rigid angle iron frame. Equipped with four 4" ball-bearing fiber casters—swivel casters centered at front and rear; rigid casters centered on each side. Model 4-B has hinged drop panel on side equipped with positive safety latches.

- Also other types of expanded metal containers in sizes and quantites to customer's specifications.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

For more details circle NED-11 M8 on enclosed inquiry slip

UNIVERSAL INDUSTRIAL CONVEYOR

Low First Cost . . . . Low Maintenance

- Removable sides to permit handling large cartons or parts.
- Motor totally enclosed inside conveyor body easily accessible through removable ventilating panel.
- Elevates to desired height with simple hoisting mechanism.
- Driven by means of roller chain to roller bearing equipped gear box.
- Main drive shaft and idler pulley operate on double-sealed ball bearing.
- Standard belt width, 12 inches. Other widths can be furnished to meet your requirements.
- Belt speed, 74 F.P.M.—adjustable if desired.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

For more details circle NED-12 M8 on enclosed inquiry slip

Toward Better Maintenance

Safe and pleasant working conditions, productivity, and profitable operation throughout industry are closely allied with efficient plant maintenance and engineering. A majority of our readers are concerned with some phase of this management obligation. Any new development in maintenance equipment, material, or technique creates far above-average reader action. Editorially, as well as in the advertisements, we cater to these reader needs. We present all the important developments in maintenance and engineering products that can contribute to more efficient plant operation.

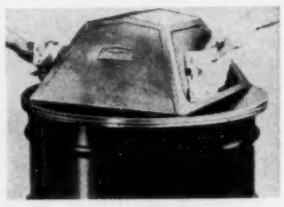
Each year, NEW EQUIPMENT DIGEST participates in the Plant Maintenance Show. It will be held in the Public Auditorium, Cleveland, Ohio, January 26 to 29, 1959, inclusive. We urge you to attend.

You will be able to see, first hand, many of the new and improved products that we have described editorially. You will get ideas that can be converted into improved plant operation. You can discuss unsolved maintenance problems with sales and engineering personnel. You will also be able to hear experts discuss all phases of industrial plant maintenance at the twenty concurrent sessions and round tables that will be repeated on two successive two-day programs which make up the conference. Over 400 manufacturers will exhibit their products.

Advance registration cards, details of the conference program, and hotel information can be obtained from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y.

A. N. Gregg
EDITOR

SWING-TOP DRUM LID KIT converts drum to waste container



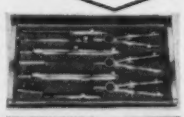
Empty 15, 30, and 55-gal drums can be converted to safe, attractive waste receptacles with conversion kits now available. Kit consists of one Convert-A-Drum swing-top lid, a can of Instant-Dry spray coating to give drum a new look, and one Easy-On burlap bag that hooks inside drum to prevent corrosion and to facilitate disposal. The steel lids have two free-swinging doors and are finished in baked green enamel. They are available individually or as part of the kits and are priced from $7.75 to $14.25. The 55-gal drum kit sells for $19.95. Offered by **General Scientific Equipment Co.**, 7516 Limekiln Pike, Philadelphia 50, Pa.

For more details circle NED-13 M8 on enclosed inquiry slip

BARGAINS YOU CAN TRUST
Priced to Save You 50% and More!

FREE CATALOG OFFERED BELOW

Order by Stock No.—Open Acct.—Check or M.O.
(Complete satisfaction or money back)



CLOSE OUT! MECHANICAL DRAWING SET
Regular Price $18.00, Our Price Only $6.00 Ppd.
American manufacturer couldn't compete with foreign imports — thus you get a terrific bargain, even far below import prices. 10 handsome pieces in velvet-lined case. Nickel plated brass — precision American-made. We guarantee you'll be satisfied or money refunded.
Stock No. 50,200-AE ..... $6.00 Ppd.
Quantity Price
5 Sets, $5.50 Ea. Ppd. — 10 Sets, $5.00 Ea. Ppd.

ERECT IMAGE LOW POWER MICROSCOPE
5X, 10X, 20X *$80.00 Value — Only* $19.95
Extremely sturdy with rack and pinion focusing, color corrected optics, turntable microscope body for inclined viewing, three different powers, long working distance under objectives, sufficient eye relief for easy viewing. Made from war surplus optical instrument so that you actually get $80.00 of value. Weighs 4 lbs., 13" high. **10 DAY FREE TRIAL!** Accessory objectives available for powers of 15X, 30X, 40X.
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Machine engraved for long life — white solid plastic 10" Slide Rule. Face scales A-B-C1-C-D-K Reverse, S-L-T, Inch and centimeter scales top and bottom. Fine lined etched glass cursor. U.S. Bureau Standards equivalents and settings. Smooth and easy slide operation. Made in U.S.A. Direction Booklet included. Regular $7.00 value and an unusual buy.
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EDMUND SCIENTIFIC CO. BARRINGTON NEW JERSEY

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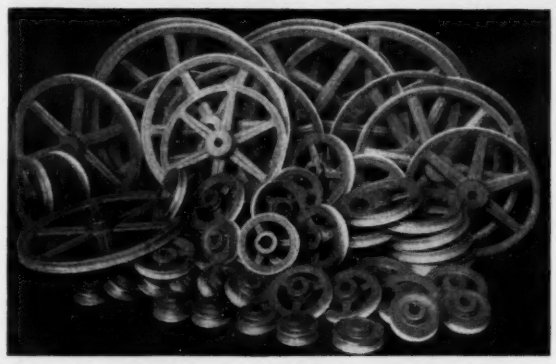
KERRIGAN IRON WORKS, Inc.
P.O. Box 479 — Nashville, Tennessee

For more details circle NED-15 M8 on enclosed inquiry slip



BROWNING FHP SHEAVES
the most extensive line on the market!

Only Browning offers you all three kinds of sheaves: **Die Cast** for light duty, low initial cost. **Pressed** Steel for sturdy, rugged service at medium price. And **Cast Iron** for heavy duty, highest quality, greatest value; with fixed bore or Browning's famous interchangeable split taper bushing. Choose the sheave most efficient and economical for your every job from Browning's complete range of stock sizes.

Ask your Browning distributor or write us for Catalog V147.

Browning MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY

For more details circle NED-16 M8 on enclosed inquiry slip

MAXIMUM WORKING FORCE IN MINIMUM WORKING SPACE

Air or Hydraulic

milwaukee CYLINDERS

- Quality Construction Throughout
- Guaranteed Top Performance
- No Costly Down Time
- Precision Designed — Heavy Duty Service
- Conforms to JIC Specifications

Get all the facts and see how Milwaukee Cylinders can save space and weight . . . Save on original cost and save on maintenance.
Write today for Free Bulletins A-100 and H-100.

Standard Models Hydraulic Bore Size 1½ to 12"
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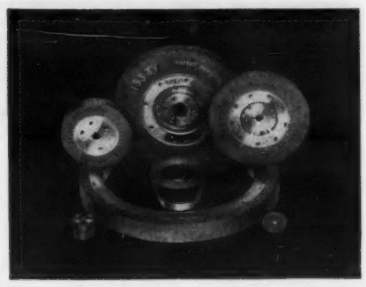
Specials built to your specifications

MILWAUKEE CYLINDER CO.
Division of L. & M. Machine Company
5755 SO. PENNSYLVANIA AVE., CUDAHY, WIS.

For more details circle NED-17 M8 on enclosed inquiry slip

NEW IDEA IN POWER BRUSHES!



HOW OSBORN TY® BRUSHES

can cut your high finishing costs

For jobs *beyond the reach* of standard wire power brushes—Osborn TY® Tool Brushes are designed to work where abrasive stones or belts, rotary files or tumbling and shot blasting equipment have been used. And TY® Brushes do many jobs *better...faster...at far less cost.*

Production-proved TY Brushes give you maximum work efficiency with minimum brushing pressure ...greater brushing action strength ...positive control over area of brush contact . . . uniform work finish . . . and extra-long brush life.

Write for full details. *The Osborn Manufacturing Company, Dept. N-1, Cleveland 14, Ohio.*

TY® BRUSH APPLICATIONS
- Wire insulation stripping
- De-burring and blending sharp edges
- Precision surface finishing
- Removing flash
- Roughening materials for bond
- Removing surface scale and oxides

FREE BOOKLET—Write for your copy of "Osborn TY® Tools"—includes complete, illustrated data on applications and specifications covering many of your production jobs.

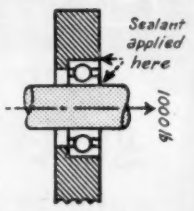
Osborn Brushes

POWER, PAINT AND MAINTENANCE BRUSHES • BRUSHING METHODS
BRUSHING MACHINES • FOUNDRY PRODUCTION MACHINERY

For more details circle **NED-18 M8** on enclosed inquiry slip

Edwin F. Oblinger, Chief Engineer, Parker Sweeper Co., says:

"WE THREW OUT PRESS FITS FOR BEARINGS...



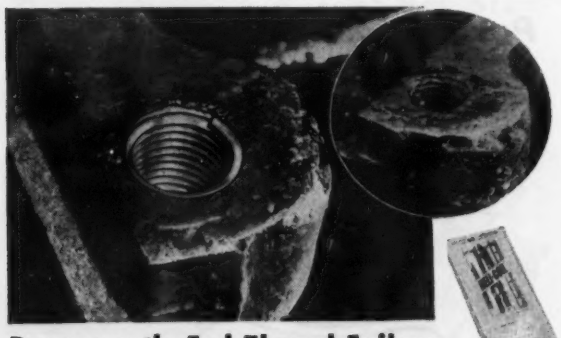
We used interference fits to prevent bearing races from turning in the gear box of our 4HP Turbosweeper. Maintaining close tolerances was a constant headache. If the fit was loose, the race would slip and fret; if the fit was tight, the race would deform shortening bearing life. Now LOCTITE does away with press fits. We open tolerances almost .002" on shaft and housing and use a slip fit, filling the clearance with LOCTITE. The bearings are retained with a force equal to the customary interference fit . . . a load of over 1,000 pounds is needed to break the bond . . . but we've reduced rejected parts from 8% to less than 1% and reworked parts fell from 20% to 0! Field reports are excellent."

Loctite is a penetrating liquid that hardens into a strong, heat and oil-resistant bond between closely fitted metal parts. Loctite eliminates the need for interference fits on bearings, sleeves, shafts and studs . . . locks nuts to bolts, seals pipe and tubing joints. Write today for information and sample.

LOCTITE® SEALANT

AMERICAN SEALANTS CO. 229 Woodbine St., Hartford 6, Conn.
In Canada: J. S. Parkes & Co., Ltd., Montreal

For more details circle **NED-19 M8** on enclosed inquiry slip



Permanently End Thread Failure That Costs You Needless

• downtime • production loss • labor costs

Worn, stripped threads? Here's all you do:

1. drill out the old threads
2. tap with *Heli-Coil** tap provided in SHOP-PACK
3. wind in a *Heli-Coil* precision formed, stainless steel Screw-Thread Insert.

Result—Back-to-original-size threads that permanently resist wear, corrosion, galling and stripping.

Heli-Coil Screw-Thread Inserts are available in all standard thread sizes in the economical SHOP-PACK Thread Repair Kit containing a large supply of inserts and all necessary installation tools. Write today for folder and name of your nearest *Heli-Coil* distributor. *Reg. U.S. Pat. Off.

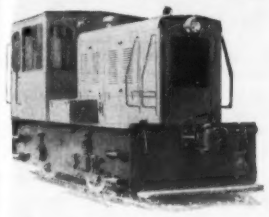
HELI-COIL CORPORATION
3412 Shelter Rock Lane, Danbury, Conn.

In Canada: W. R. WATKINS CO., Ltd., 41 Kipling Ave., S. Toronto 18, Ont.

For more details circle **NED-20 M8** on enclosed inquiry slip

INDUSTRIAL LOCOMOTIVES offered in 5 to 40-ton sizes

High continuous tractive effort in the entire working range and powerful acceleration for ease of switching are built into this line of custom diesel-hydraulic and diesel - electric locomotives.



Each has a high-torque diesel engine, torque converter, and power shift transmission. Made in 5 to 40-ton sizes for track gages from 21 to 56½ in., they have welded main frames, high visibility cabs with ventilating windows, and controls which permit use by unskilled workers. Among numerous accessories offered is a fume scrubber which permits locomotive use in tunnels, buildings, and other confined areas. Made by **Rogers Brothers Corp.**, 26 Orchard St., Albion, Pa.

For more details circle **NED-21 M8** on enclosed inquiry slip

HIGH VOLTAGE LIGHT BULBS 100-1500 w units have 2500-hr life

Expanded line of Extended Service light bulbs for high voltage service is designed to offset the high labor cost involved in relamping. Made with a 230 to 250-v range, bulbs have a 2500-hr life. They are available in sizes from 100 to 1500 w. Lamps have lifetime filaments and are designed for use in hard-to-get-at locations. Use of these lamps can cut bulb changes 2½ to 3½ times over most general service lamps. Made by **Westinghouse Electric Corp.**, Lamp Div., MacArthur Avenue, Bloomfield, N. J.

For more details circle **NED-22 M8** on enclosed inquiry slip

POWER YARD MACHINE suited for wide range of work

Particularly suited to grounds maintenance work, the Yard Master Mark 30 is now equipped with a reel - type mower and can be fitted with attachments for grading, rolling, mulching, snow plowing, and to haul loads weighing up to ½ ton. Three 21 in. reel mowers can be added so that machine will cut a 5-ft wide path. Ease of handling is assured by the Speedmatic transmission with its five forward speeds, neutral, and reverse. Steering mechanism enables it to turn in a 36-in. inside radius. Power for the attachments and to the jumbo balloon tire wheels is provided by a four-cycle Lauson air-cooled gasoline engine. This small rider type tractor is made by **Porter-Cable Machine Co.**, 131 Exchange St., Syracuse 4, N. Y.

For more details circle **NED-23 M8** on enclosed inquiry slip

this jack only 7" high

This "Shorty" jack (No. 1507) lifts 15 tons 2½ inches yet is only 7" high.

...will raise 15 tons

It has no fluids to leak, no cup leathers to wear out, no air or vapor lock—can be used sidewise, or upside down. It's a precision engineered, ball bearing screw jack with fully enclosed one piece malleable housing, seldom needs lubrication or servicing. Thousands of these easy to operate jacks are saving time and money wherever powerful lifting is required under low set loads. Ask your recognized distributor or write for bulletin AD-12-N, Duff-Norton Co., P.O. Box 1889, Pittsburgh 30, Pa.

DUFF-NORTON JACKS
"Giving Industry a Lift Since 1883"

For more details circle **NED-24 M8** on enclosed inquiry slip

FOR AIR-DUST OR FUME CONTROL...

Get this FREE catalog

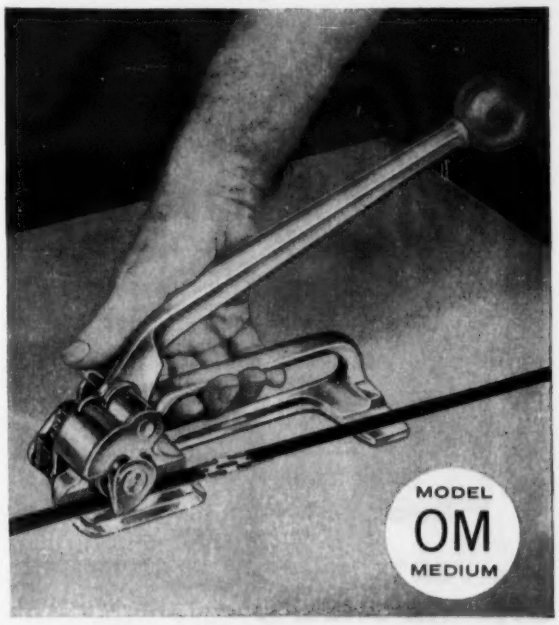
WRITE TODAY FOR CATALOG #70 SHOWING NEW INDUSTRIAL APPLICATIONS

FLEXAUST hose and PORTOVENT retractable ducts are made of strong durable neoprene coated nylon or cotton fabrics, wire reinforced for suction or pressure uses. Sizes 1¼" to 36" i.d.

INSTALLED IN MINUTES . . . IN SERVICE FOR YEARS

THE FLEXAUST COMPANY
DEPT. NED-12 100 PARK AVE., NEW YORK 17, N. Y.
DISTRIBUTORS IN ALL PRINCIPAL CITIES

For more details circle **NED-25 M8** on enclosed inquiry slip



NEW STANLEY TIGHTENERS

Versatile...Lightweight...Sturdy—

The Stanley O Tightener sets a new standard of efficiency for tensioning steel strapping to the required maximum with a manually-operated steel strapping tool with unlimited take-up. Operates with ease and speed in any position. Requires fewer strokes for take-up of strapping; reduces operator fatigue. Seals may be applied behind tensioning wheel, cutting overlap to minimum required for maximum joint security.

- Insertion of strapping is easy, quick.
- Light weight and balance assure handling ease.
- Two pawls on tensioning wheel make tightening action more positive.
- Unlimited take-up.
- Seals applied in front or behind tensioning wheel.

MODEL	OL 3	LIGHT DUTY	3/8" STRAP
	OL 4		1/2"
	OL 5		5/8"
MODEL	OM 5	MEDIUM DUTY	5/8" STRAP
	OM 6		3/4"

FOR MORE INFORMATION . . .
Write STANLEY STEEL STRAPPING, Division of The Stanley Works, Dept. L, 1316 Corbin Ave., New Britain, Conn.

INSURE IT – SECURE IT WITH STANLEY STEEL STRAPPING

AMERICA BUILDS BETTER AND LIVES BETTER WITH STANLEY

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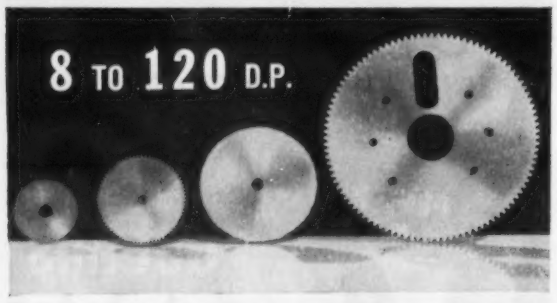
This famous trademark distinguishes over 20,000 quality products of The Stanley Works—hand and electric tools • drapery, industrial and builders hardware • door controls • aluminum windows • stampings • springs • castings • strip steel • steel strapping—made in 24 plants in the United States, Canada, England and Germany.

For more details circle **NED-26 M8** on enclosed inquiry slip



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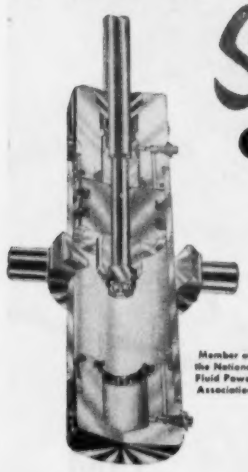
all the **EXTRAS** are standard with

T-J **Spacemaker CYLINDERS**



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- **HARD CHROME PLATED** body bores and piston rods . . . assure you of long trouble-free service. (Standard at no extra cost.)
- **METALLIC ROD SCRAPER,** not just a wiper, actually removes foreign matter from the rod.
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CHROMALOX Electric Heat
Edwin L. Wiegand Company
7509 Thomas Boulevard, Pittsburgh 8, Pa.

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NEW EQUIPMENT DIGEST

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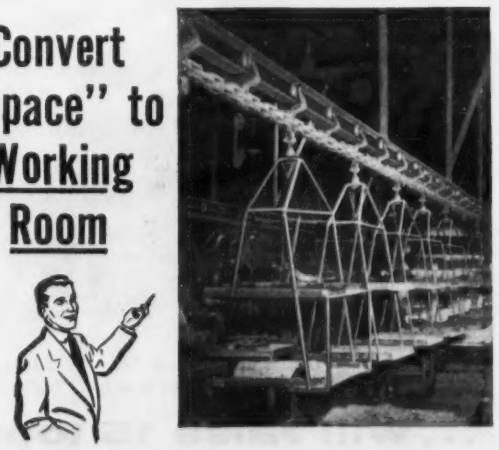
"Dillon Dynamometers at Work in the World" is a compilation of information on how and where these instruments are serving industry. Pictures show how to make spring testers, measure deflection of aircraft wings, check railroad switches, measure motor torque, and protect equipment from overload. This pictorial, 96-page manual on absorption type and traction load measuring dynamometers is priced at 50 cents. Published by W. C. Dillon & Co., Box 3008, Van Nuys, Calif.

For more details circle NED-30 M8 on enclosed inquiry slip

Convert "Space" to Working Room



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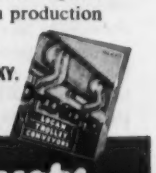

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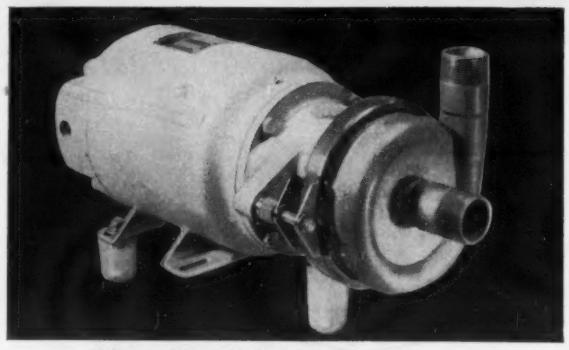

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Cedar Rapids, Iowa

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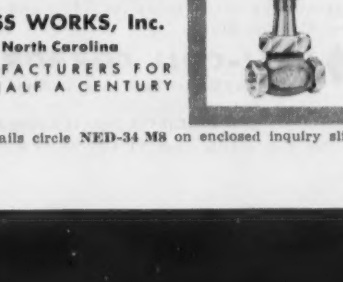

New design supplies large volume of flow rate with a smaller size softener

The new Kisco Super-Flo provides a non-restricted maximum flow of soft water, making it possible to obtain the same high capacity with a smaller size unit. Select the softening capacity to meet your requirements with a resulting tremendous saving in initial cost. Write for catalog.

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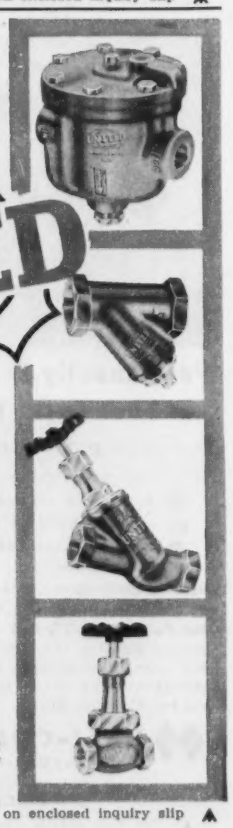

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If you manufacture or use equipment with valves as component parts—protect your reputation with United valves! United makes a wide variety of standard valves for all purposes, or especially designed for your need. United is a dependable source of supply. So why gamble? Write for full details today!

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VALVE MANUFACTURERS FOR HALF A CENTURY

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HOBBS 72" SLITTER & REWINDER

Built to Process PVC Film for Prominent Foil Company

This machine is equipped for shear cutting and includes heavy duty Unwind Stand, 2-core lock rewind mandrels for use with 3" i. d. heavy wall paper cores, rewind drive with Alquist Progressive Friction for tension control, D.C. Variable Speed Main Drive for 0 to 600 f.p.m. speed regulation, speed indicator, HG Constant Tension Unwind Unit and pneumatic sensing hydraulic positioning web guide on unwind stand.

What are YOUR slitting and rewinding requirements? Tell us and let us make tailor-made recommendations.

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WINDERS • HAND & POWER SHEARS
SLITTERS • DIE PRESSES • CORNER CUTTERS

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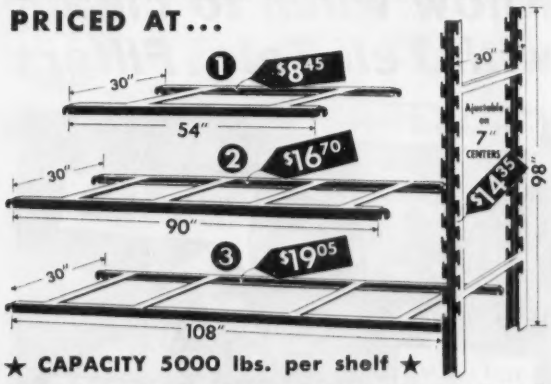
STANDARD SIZE PALMER-SHILE Adjustable STORAGE RACKS

SERIES 60 Pat. App. For

JUST TWO STEPS—SET UP PANELS SNAP SHELVES IN POSITION

3 SHELF SIZES • 1 PANEL SIZE PRICED AT...



★ CAPACITY 5000 lbs. per shelf ★

IMMEDIATE DELIVERY FROM STOCK OF LOW COST P-S Standard Series 60 Racks are ideal where fast action is necessary to solve your storage problem. Built of sturdy steel channel they are capable of handling almost any kind of materials and merchandise on pallets, skids, boxes or barrels. Come in four pieces—A. Vertical PANEL 8½' high, 30" deep and 2½" wide with shelves adjustable to 7" centers. B. THREE DIFFERENT SHELF LENGTHS 4½', 7½' and 9' each 30" deep. No small parts, set entirely by hand, top shelf can be flush. Standard racks can be joined in multiple sections of the same shelving lengths, or any combination.

Can be built to customer specifications

DESIGNED AND MANUFACTURED BY
Palmer-Shile Co.
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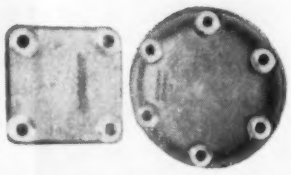
Export Division—75 West St., NEW YORK 6, N. Y.

▲ For more details circle NED-36 M8 on enclosed inquiry slip ▲

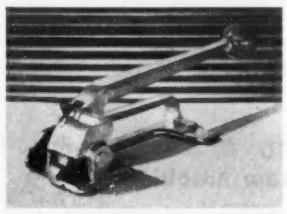
MAGNESIUM COVER PLATES for aircraft accessory drives



AN Series of magnesium cover plates for aircraft accessory drives, housings, and similar aplications is suitable for storage and flight purposes. Series comprises the AN-100041, Type XV; AN-100043, Type XII; AN-10044, Type XVI; AN-100036, Type XI; AN-100038, Type X; and the AN-100039, Type XIII. These include a 3-in. square size and round sizes of 5 and 11 in. diameter. Made by **Bronze Bearings Inc.**, 340-344 North Ave. E., Cranford, N. J.

▲ For more details circle NED-37 M8 on enclosed inquiry slip ▲

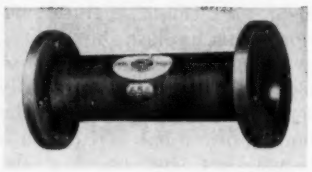
STRAPPING TIGHTENER will strap in any direction



Used to apply steel strapping to packages of varying sizes, shapes, and weights, the Stanley O strapping tightener can be operated in any position. It will strap in any direction, using the right or left hand. The lightweight, manual tool requires a minimum number of strokes to operate and, by applying seals to the rear of the tensioning wheel, cuts overlap to a minimum. Tool is quickly removed after strapping is completed. Light duty Models OL3, OL4, and OL5 take ⅜, ½, and ⅝-in. strap, respectively. Medium duty Models OM5 and OM6 take ⅝ and ¾-in. strap. Made by **Stanley Works**, Stanley Steel Strapping Div., 111 Elm St., New Britain, Conn.

▲ For more details circle NED-38 M8 on enclosed inquiry slip ▲

RUBBER COMPOUND PIPE abrasive and corrosion resistant



Long flexing life, absence of embrittlement and scale formation, and low wear are features of Tuf-Flex rubber compound pipe. It is suited for installations handling abrasive or corrosive liquids, slurries, suspension, and solids. Pipe, tees, expansion joints, and elbows made of the material can be used in pressure and vacuum systems in chemical, food, mining, nuclear, pulp, and sewage operations. Pipe is made in standard sizes from ½ to 72 in. ID, with either duck and rubber or duck and neoprene integral full-faced flanges or integral Gen-Lok ends. Covers of units can be furnished to resist corrosion, oils, heat, and sunlight. Lengths up to 50 ft are offered. Made by **General Rubber Corp.**, 52 Summit St., Tenafly, N. J.

▲ For more details circle NED-39 M8 on enclosed inquiry slip ▲

no more cold feet with Electro-Mat
ELECTRIC FLOOR MAT

helps prevent colds

Production line and office workers can now work in absolute comfort

The new low-priced ELECTRO MAT throws off a gentle warmth that keeps workers healthy, happy and comfortable. 14" x 21" portable foot warmer is safe and economical . . . consuming less power than a 100 Watt light bulb. It is made of high quality oil-resistant rubber.

Attention Employers

Increase the efficiency of your employees and help prevent colds which cause absenteeism. Equip each employee with an Electro Mat.

IMPORTANT SAVING: If 6 or more Electro Mats ordered price is only $6.95 each.
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Enclosed is my check ☐ money order ☐
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Dealer Inquiries Invited.

▲ For more details circle NED-40 M8 on enclosed inquiry slip ▲

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PIKE 4½ power ACHROMATIC

FLASH-O-LENS illuminated magnifiers

4½x portable battery model; also electric "plug-in" models

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- adjustable image
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20x or 40x

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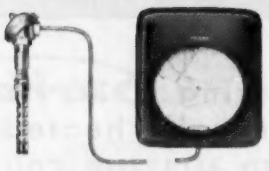
WIDEST RANGE OF EQUIPMENT FOR
HUMIDITY RECORDING



No matter what problems you face in obtaining suitable humidity measurements and records, the unique versatility of Foxboro Humidity Instrumentation offers an appropriate solution . . . recorders, recording controllers, and indicators for relative humidity (hygroscopic type) and wet-and-dry bulb measurements, and, using the exclusive Dewcel element, direct reading dewpoint and absolute humidity measurements. Available in portable, close-coupled and long-distance types; with round or rectangular cases.

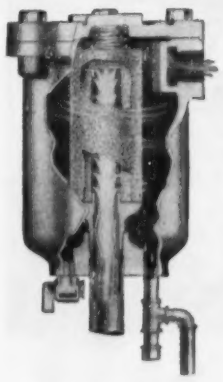
Get the complete story in Bulletins 11-11A and 11-14A. The Foxboro Company, 6612 Neponset Avenue, Foxboro, Mass., U.S.A.

FOXBORO Reg. U.S. Pat. Off. HUMIDITY INSTRUMENTS

▲ For more details circle NED-42 M8 on enclosed inquiry slip ▲

ADAMS PORO-STONE AIR FILTER,

designed to remove oil, water and foreign matter from compressed air lines with minimum pressure drop.



The R. P. Adams Poro-Stone air filter is engineered to efficiently remove entrained oil, water and pipe scale from compressed air lines. Liquid droplets and solids being carried by the gas stream are first removed by centrifugal action in an annular chamber. Secondary filtration is achieved by passing the air or gas stream through a poro-stone unit. An automatic trap can be provided to discharge the residue from the cyclone chamber.

At rated capacity the filters operate at a maximum pressure drop of only ½ lb., thus insuring delivery of line pressure to the point of consumption.

The units require virtually no service or maintenance—thereby insuring continued trouble-free, low cost performance.

ADAMS Poro-Stone air filters are available from stock in sizes to suit your needs. For further information, write today for Bulletin 117, R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York. *Advt.*

▲ For more details circle NED-43 M8 on enclosed inquiry slip ▲

From high vacuum to 20,000 PSI and −85°F. to +360°F., only Stat-O-Seals offer safe, sure, effective sealing using the principle of controlled confinement of the seal plus **mechanical** bonding.

They will not "twist" in installing and there's no chemical bonding agent that can be attacked by corrosives . . . and: metal-to-metal contact; quick, visual inspection; simple, one-piece assembly; re-useable; o-ring style configuration for versatility and freedom from damage.

By the makers of Parker O-rings and Gask-O-Seals.

Parker SEAL COMPANY
CULVER CITY, CALIF. • CLEVELAND, 12, OHIO
A DIVISION OF Parker Hannifin CORPORATION

▲ For more details circle **NED-47 M8** on enclosed inquiry slip ▲

8 new bulletins

featuring Sta-Warm electrically heated

COMPOUND MELTING EQUIPMENT

for heating, storing, conveying, dispensing or spraying a wide variety of compounds, soft metals, waxes, pitch, tar, resins, thermo-plastics, oils, paints, cosmetics, potting compound, synthetic adhesives, glue and similar materials . . .

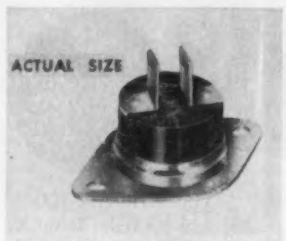
Inquire today for any or all of these **FREE** illustrated descriptive bulletins which include general specifications of many lines of Sta-Warm popular compound melting equipment. *No obligation.*

"If You Can Wrap a String Around It, Sta-Warm Can Heat It for You."

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of ABRASIVE & METAL PRODUCTS CO.

▲ For more details circle **NED-48 M8** on enclosed inquiry slip ▲

THERMOSTAT
precision, fixed temperature type



For use where space and weight limitations exist, the Klixon M201 precision thermostat has an over-all diameter of 5/8 in. and a weight of only 4 oz. Switch action is single - throw, with double-contact make-and-break. Actuating element of the fixed temperature unit is the thermal disc. A stainless steel enclosure offers dust and dirt protection. Life cycle is from 6000 at 12 amp resistive to 100,000 at 2 amp resistive, 120 v ac. Temperature settings range from −85 to 500° F. Tolerances and minimum differentials between opening and closing temperatures in settings of 32 to 300° F are ±5 to 12° F and 15 to 25° F, respectively. Special constructions for high impact loads and high and low temperatures are available. Made by **Metals & Controls Corp.**, Spencer Div., 1500 Forest St., Attleboro, Mass.

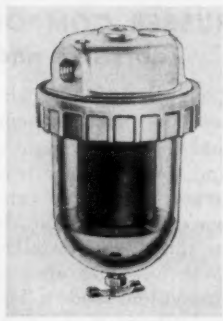
▲ For more details circle **NED-49 M8** on enclosed inquiry slip ▲

WEAR-IN COMPOUND
for breaking in new machinery

Galling, seizing, and excessive wear occurring during the "wearing-in" of new machinery can be minimized by the use of Molykote wear-in compound. It also tends to hold the breaking-in period to a minimum time. Compound need not be burnished into the surface. Made by **Alpha-Molykote Corp.**, 65 Harvard Ave., Stamford, Conn.

▲ For more details circle **NED-50 M8** on enclosed inquiry slip ▲

AIR LINE FILTER
uses throw-away type cartridge



Air entering this compressed air line filter passes through a directional flow chamber which creates a cyclonic separating action within its plastic bowl. Dirt, grit, condensate, and other foreign matter are automatically separated and forced to the bottom of the bowl. Residue is blown out by opening the blow-off valve. Air thus cleaned passes through an interchangeable throw-away filter cartridge where a second cleaning process removes all remaining particles within a 40-micron rating. Unaffected by most gases and liquids, the cartridges are offered in 10, 25, and 40-micron ratings, and can be changed without removing the filter from the line. Filter is designed for straight-through or angle installation in 1/4, 3/8, 1/2, and 3/4-in. NPT sizes. An aluminum bowl is optional. Made by **Perfecting Service Co.**, 332 Atando Ave., Charlotte 6, N. C.

▲ For more details circle **NED-51 M8** on enclosed inquiry slip ▲

DEKA BORE

OFFSET BORING HEADS

UNPARALLELED
- ACCURACY
- RIGIDITY
- SIMPLICITY
- DURABILITY

REPEAT TO .0001" IN 30 SECONDS WITHOUT BACKLASH! CAN BE ADAPTED TO FIT ANY MACHINE

100% GUARANTEED! WRITE FOR CATALOG!

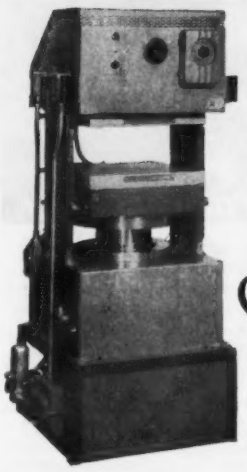
PRECISION

PRECISION TOOL & MFG. CO. of ILLINOIS
1305 SOUTH LARAMIE AVE., CICERO 50, ILL.

▲ For more details circle **NED-52 M8** on enclosed inquiry slip ▲

HYDRAULIC PRESSES

20 tons to 500 tons ram pressure



Platen area 8 to 24 inches
Motorized hydraulic system
Controlled platen temperatures to 600° F
Automatic time cycler
Customized to your requirements

PHI PRESS *formerly Preco*

Write for circular or if you prefer we'll have our nearest representative call on you . . .

Pasadena Hydraulics, Inc., 1434 Lidcombe, El Monte, Calif.

▲ For more details circle **NED-53 M8** on enclosed inquiry slip ▲

PURIFY WATER INSTANTLY

. . . remove suspended solids and most minerals!

available in 1, 3 & 6 candle units

DYNION PURIFYING FILTERS

instantly destroy all harmful bacteria in even the most heavily polluted water . . . safely, positively . . . by passing it through the porous, silver impregnated walls of hollow filter candles. The fine porosity of the candles, plus their core of activated carbon, remove all suspended solids, plus most minerals and unpleasant odor and taste. The result is pure, healthful, good-tasting water. Dynion is ideal for use in plants, food processing, vending machines, swimming pools, homes, farms . . . anywhere pure water is important!

For information on capacity and prices of units and candles . . . WRITE

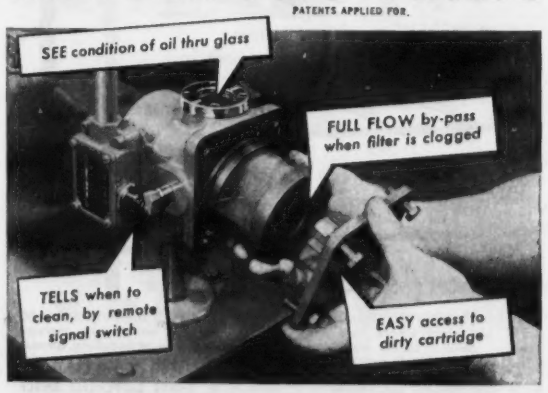
WATER CONDITIONING DIVISION

J. H. SCHARF MFG. CO. 6120 Binney St. Omaha, Nebr.

▲ For more details circle **NED-54 M8** on enclosed inquiry slip ▲

Know when to clean, with Tell-Tale® Filters

PATENTS APPLIED FOR.



The when-to-clean signal stops needless maintenance, clogged filters, and starved pumps. Easy-cleaning features minimize down-time, and you choose the amount of allowable pressure-drop. In sizes from 5 to 200 gpm, for all hydraulic and coolant circuits. Mechanical indicator model (5 gpm) at left. Write today.

The ROSAEN COMPANY
1776 EAST NINE MILE ROAD • HAZEL PARK, MICHIGAN

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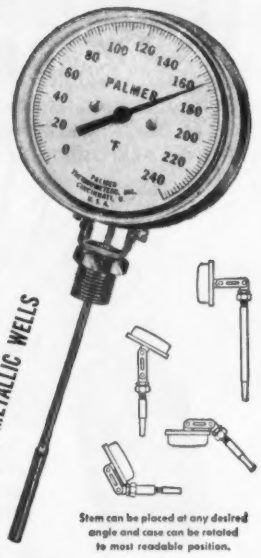
Outstanding Accuracy

PALMER

DIAL THERMOMETER

3½ Dial face



Check these functional features

- Direct-drive Bourdon Coil with a filled system for longer lasting accuracy.
- Stem can be placed at any desired angle and case can be rotated to most readable position.
- External calibration for zero setting.
- Unaffected by stem alignment.
- Accurate to one scale division.
- No sticking at any temperature.
- Non-corrosive case.

Stem can be placed at any desired angle and case can be rotated to most readable position.

Write for Free Bulletin 1035 for complete description and prices.

PALMER THERMOMETERS, INC.
Mfrs. of Industrial Laboratory, Recording and Dial Thermometers
2515 Norwood Ave., Cincinnati 12, O.

▲ For more details circle NED-56 M8 on enclosed inquiry slip ▲

Loosens FROZEN PARTS FAST!

Handy
Won't Leak
Shoots 3 Feet

Same formula as famous Kroil that has pleased 14,000 industrial users for 10 years or more.

Loosens stuck together metal parts, bushings, bearings, bolts, screws, pipe, etc., "anything from an embalmer's needle to a bulldozer," one customer said.

"Like an extra employee," said another. "Turned rust into mush, put $50,000 equipment back to work."

You too can get these results.

Try Aerokroil at our risk. Send $2 cash, and we'll pay postage.

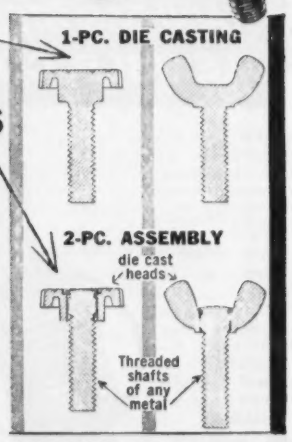
12-OZ. CAN $2.
F.O.B. NASHVILLE
CASE OF 12 $18.75

KANO LABS. 1074 S.Thompson Lane Nashville 11, Tenn

▲ For more details circle NED-57 M8 on enclosed inquiry slip ▲

GRC die cast WING & THUMB SCREWS

4 types to meet ALL needs



GRC offers you quality, quantity and economy PLUS your choice of two basic styles—one-piece zinc alloy die cast fasteners or assembled zinc alloy blanks with screw material of other metals.

Wing Screws have generous washer-type shoulders, patented recessed fingergrip wings.

Thumb Screws have exclusive wide heads for firm, comfortable grip; plain or shoulder type.

Clean accurate threads. Bright rustproof, noncorrosive finish. Wide range of styles, threads and lengths.

Write NOW for GRC's new catalog of Die Cast & Molded Fasteners.

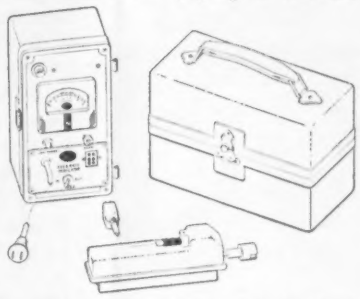
World's Foremost Producer of Small Die Castings

GRIES REPRODUCER CORP.
143 Beechwood Ave., New Rochelle, N. Y., NEw Rochelle 3-8600

▲ For more details circle NED-58 M8 on enclosed inquiry slip ▲

FEED RATE INDICATOR
gages forward, reverse feed rates

Range of 0 to 50 ipm over 4 in. of travel is built into the 110-v ac Natco feed rate indicator. The compact, portable device facilitates the gaging of forward and reverse feed rates of machine tool components. Indicator consists of a pick-up component and a control unit, both housed in a 9½ x 6½ x 4½-in. case. Pick-up is mounted on a machine way or slide by permanent magnets in its base, and the feed rate is read directly from a dial on the control component which is light enough to be held in the user's hand. Indicator is similar to a previously-announced battery powered model. Made by **National Automatic Tool Co.**, 715 S. N St., Richmond, Ind.



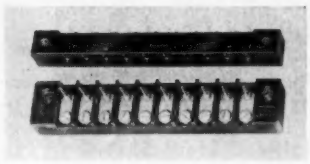
▲ For more details circle NED-59 M8 on enclosed inquiry slip ▲

PLUG-IN LIMIT SWITCH
can be adjusted after installation

Micrometer adjustment of this oil-tight, roller - plunger operated plug-in limit switch allows up to ⅛-in. movement of roller position after switch installation. Thus, accurate adjustment can be made without moving switch itself. Roller operating direction can be changed 90 degrees to allow for cam approach perpendicular to base of switch. Designed to be cammed, switch is not limited to a head-on approach of the cam. It requires only 5½ sq in. of mounting space and can be mounted in any one of six arrangements. Made by **Square D Co.**, 4041 N. Richards St., Milwaukee 12, Wis.

▲ For more details circle NED-60 M8 on enclosed inquiry slip ▲

TERMINAL BLOCK
10-contact unit handles 15 amp



This ten-contact, plug and socket terminal block can handle up to 15 amp and 10,000 v rms at sea level. Each pin contact is common with individual buss plates and separated by molded barriers. Solder cups accommodate No. 14 AWG wire. Floating socket contacts assure positive alignment of each contact. Plug and socket are provided with standard mounting holes. Molding is black phenolic. Made by **DeJur-Amsco Corp.**, Electronic Sales Div., 45-01 Northern Blvd., Long Island City 1, N. Y.

▲ For more details circle NED-61 M8 on enclosed inquiry slip ▲

EXPLOSION PROOF SOLENOIDS AND SOLENOID OPERATORS

FX-326 SOLENOID
FX-300 LINE
EXPLOSION PROOF
SOLENOIDS

R2DX-326
RDX-300 LINE

The FX-300 explosion proof solenoids and the RDX-300 explosion proof solenoid operators have a variable stroke. For the standard models at minimum stroke, the capacity at 85% voltage ranges from 8 lbs. at 0.47" stroke to 300 lbs. at 1.67" stroke. At maximum stroke, the capacity ranges from 3 lbs. at 1.25" stroke to 100 lbs. at 5" stroke.

By the use of external levers longer than the standard ones, the maximum stroke can be increased with corresponding decrease in pull.

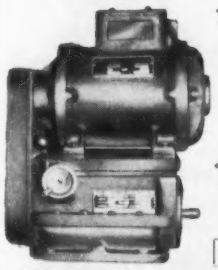
For external levers twice as long as the standard ones, the capacity at maximum stroke ranges from 1.5 lbs. at 2.5" to 50 lbs. at 10". Other combinations are possible.

Ask for Bulletins EE-191 and EE-193 or our complete catalog. See our catalog in Sweet's Catalog Service. There is a Trombetta solenoid for every imaginable requirement.

TROMBETTA SOLENOID CORP.
329 N. MILWAUKEE ST. • MILWAUKEE, WIS.

▲ For more details circle NED-62 M8 on enclosed inquiry slip ▲

SAVE! WAR SURPLUS Gov't. Cost $650 BRAND NEW!



1½ HP Motor Driven (single or 3-phase)
VARIABLE SPEED
HYDRAULIC
SPEED REDUCER
with
Instantaneous *REVERSING!*

Output Speed Reversible in either direction from 0 to 750 R.P.M.

FULLY GUARANTEED

ONLY **$122** fob

USE FOR: Lathe heads, reamer drives, conveyors, printing presses, cream separators, garden tractors, midget cars, pumps, blowers, canning machines, test benches, etc.

#VS 143M with 3-phase, 60 cycle 220 Volt Motor

DRIVEN BY a 1½ HP Ball Bearing Westinghouse motor to obtain variable speed in either direction of rotation. Reversing is independent of speed control and EFFORTLESS! Ideal for CONTINUOUS REVERSING operations! Speed selection made by rotating hand wheel—gives infinite number of speeds thru entire range of unit.

UNIT consists of a 1½ ELECTRIC motor (220 Volt, single or 3-phase) driving a variable displacement hydraulic pump which in turn drives a fixed displacement hydraulic motor. Electric motor drive is positive, thru silent chain and sprocket, enclosed in oil tight guard. Transmission is self contained in sealed 2 qt. capacity aluminum oil reservoir with separate controls for speed variation and reversing. Input and output shafts are ⅝" dia., standard keyway. Weight 100 lbs. Size: 11" long, 7½" wide, 17½" high. Supplied with complete instructions and 2 qts. hydraulic oil.

 # VS-141M with 1 phase, 60 cycle, 220 Volt Capacitor Motor . . . $143.50 f.o.b.

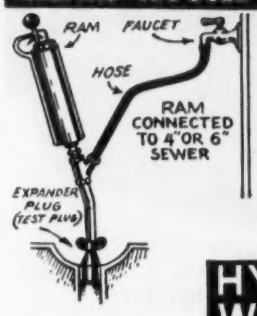
If there is any doubt to the adaptability to your particular application, we will accept your purchase order with the understanding that the unit *may be returned* for FULL credit of purchase price.

Write, Order, or Phone TAylor 9-1365

ROBERTS ELECTRIC CO., Dept., ND-863
849 W. GRAND AVE. CHICAGO 22, ILL.

▲ For more details circle NED-63 M8 on enclosed inquiry slip ▲

CLEARS CLOGGED DRAINS in Seconds!



The ideal plumbing service tool. Can pay for itself in one application!

Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM

Anyone can operate it! Thousands already in use, have saved *millions* of dollars in industry and institutions. Why lose time, suffer inconvenience, waste dollars needlessly on either completely blocked or slow-moving sewers, drains, fixtures? The HYDRAULIC WATER RAM clears severest stoppages with SPLIT-SECOND HYDROSTATIC IMPACT! . . . Shatters blockage, then flushes clean. No snakes, chemicals, cables. No pushing through. Works perfectly, vent or no vent! Nothing to wear out. You risk nothing on our 30 day free trial offer, at our expense. Write for details.

Works perfectly with all clogged fixtures, toilets, sinks, urinals, etc. Equipped with 4" rubber cone, ideal for toilets, *plus* set of 5 tapered adaptor plugs for other drains or sewers.

Write for Information, Prices, Free Trial Offer — Today!

HYDRAULIC MANUFACTURING CO.
214 INDUSTRIAL HEIGHTS KIEL, WISCONSIN

▲ For more details circle NED-64 M8 on enclosed inquiry slip ▲

CREST Heat-Pruf™ Faucet Washers LAST LONGER!

- Independent laboratory tests prove it!
- Last from 2 to 10 times longer by actual test!
- Eliminate nuisance and high cost of washer replacement!
- One of thousands of dependable Crest plumbing maintenance products — attested by Master Plumbers!

Try it yourself! Rugged "Pliers Test" proves tough Crest washers can really take it. Severe torture tests will not harm Crest washers.

FREE CATALOG

Write today for complete 200-page 1958 Crest Catalog illustrating over 3,000 Quality Plumbing and Heating Maintenance Specialties.

Gentlemen: At no obligation, please send me a FREE copy of the new 1958 Crest Catalog.

Name..... Title.....
Company or Institution.....
Address.....
City..... State.....

CREST MANUFACTURING COMPANY
4-65 48th Avenue, Long Island City 1, New York

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HAPPIER WORKMEN—BETTER WORK

DUPOR No. 46 RESPIRATOR

Big 46 sq. inch filter guards against pneumoconiosis-producing, toxic, poisonous and nuisance dusts. Can be worn with goggles or glasses. Adopted as standard by countless industries the world over. Complete protection for nose, throat, lungs. See your safety equipment supplier or order sample direct—$3.25 postpaid.

Approved by U. S. Bureau of Mines

H. S. COVER

Dept. 1205 South Bend 14, Indiana

"Respirators for Industry Since 1894"

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NOTIFIER

Reliable Fumble-proof Model BG-1 Fire Alarm—Break Glass Station

Underwriters' Listed

More than ever engineers specify "Notifier break stations with key for testing . . . or approved equal." The reasons—The Fire Alarm signal is given instantly with one single "Pull for Fire." No complicated hammers, hooks, levers, or doors to confuse when seconds count.

Slash installation costs by choosing a break station which is designed to fit any standard junction box, switch box, or plaster ring. No wasteful drilling and fitting. Slotted holes permit easy alignment. Weather-proof model at reasonable cost.

Do you have our Catalog? Contains complete details on Notifier manual and automatic fire alarm systems. Yours for the asking.

NOTIFIER CORPORATION
239 South 11th Street · Lincoln, Nebraska

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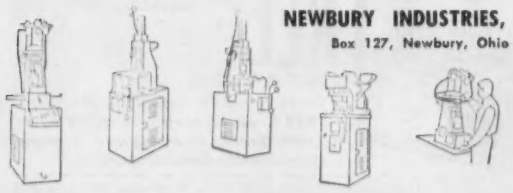
Project Engineers:

THIS FREE BOOKLET IS A "MUST"...

If your problems involve injection molding of small plastic parts. Shows you how MINI-JECTORS® cut major costs. Produce: *QUICKER*—thousands of molded items often made before big press tooling is off design board; *BETTER*—award-winning quality and precision even with molds involving inserts or loose cores; *FOR LESS*—develop and produce molded items at fraction of big press tooling costs. Shows latest methods of developing and producing small (up to 1½ oz.) items in *all* thermoplastics, including Nylon. MINI-JECTOR machines from under $1,000 complete. Mold blanks as low as $29.50. *One user saved over $4,000 mold costs alone on one item.*



NEWBURY INDUSTRIES, INC.
Box 127, Newbury, Ohio

NEWBURY INDUSTRIES, INC.
Box 127, Newbury, Ohio

Please send me your new free catalog

Name .....

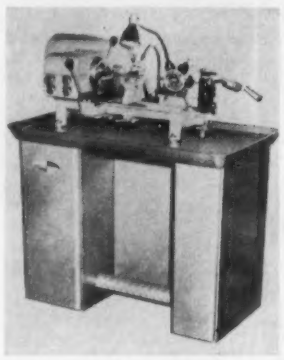
Address .....

City ..... State .....

For convenience clip coupon to your letterhead and mail.

▲ For more details circle NED-68 M8 on enclosed inquiry slip ▲

TURRET LATHE
for rapid, accurate machining



Rapid indexing control of the Model 625 precision turret lathe enables the operator to return the turret to the starting position, regardless of the number of operations performed, by lowering the control handle. A steady rest permits accurate centering of parts to be machined, holding them accurate to within 0.0002 in. Steady rest also opens and closes automatically at the start of the cutting cycle. Lathe has a maximum collet capacity of 0.625 in. Choice of two motors provides a range of six speeds between 720 and 2640 rpm and 1128 and 5275 rpm. Speed changes are rapidly made by pushbuttons on the front of the machine. Made by **Challenge Machinery Co.**, 1943 Thomas St., Grand Haven, Mich.

▲ For more details circle NED-69 M8 on enclosed inquiry slip ▲

CANVAS TOTE BASKETS
nesting units made in two sizes

Made of vat-dyed, water-repellent army duck over a tinned wire frame, these durable canvas tote baskets have washable plasticized canvas bottoms. The riveted, double canvas handle is balanced so that a basket will not tip when lifted with one hand. Baskets are light in weight, easily carried, and can be nested without sticking. Two sizes are offered: 17 x 10 x 7 in., weighing 18 oz; and 20 x 12 x 8¾ in., weighing 24 oz. Either or both sides of the blue or green baskets can be imprinted with names and numbers. Other colors can be ordered. Single unit prices are $2.75 and $3.75, respectively. Made by **Handy Folding Pail Co.**, 17 Thompson St., New York 13, N. Y.

▲ For more details circle NED-70 M8 on enclosed inquiry slip ▲

Boltless Steel Shelving

Alan Wood Steel Co., Penco Div.—Six Penco T styles of open and closed plain and ledge shelving are described and illustrated in 8-page Bulletin B-40. Companion drawer case units, service counters, tool storage racks, and shelving boxes are shown. Channel clip design speeds installation.

▲ For more details circle NED-71 M8 on enclosed inquiry slip ▲

HOW TO CUT COSTS with CABLE CONVEYORS

new bulletin 40A tells how . . .

GET YOUR COPY TODAY!

Learn how you can save valuable floor space...cut maintenance costs . . . by using BUSH-LOCK Overhead Trolley Cable Conveyor Stock Components arranged to your exact requirements. Write for the new Bulletin 40A today!

Every Way Better C-388-EWB

THE E. W. BUSCHMAN CO.
4482 Clifton Avenue Cincinnati 32, Ohio

E W B

CONVEYORS FOR EVERY INDUSTRY

▲ For more details circle NED-72 M8 on enclosed inquiry slip ▲

USG® FRACTIONAL H. P. BRUSHES

THESE USG BRUSHES CAN HELP YOU OBTAIN MORE DEPENDABLE SMALL-MOTOR PERFORMANCE

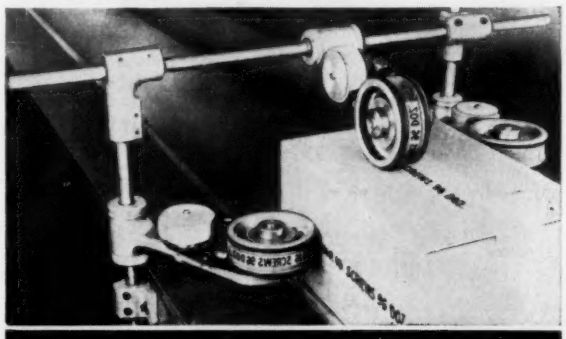
If you manufacture fractional horsepower motors, it will pay you to install USG Brushes to get the most efficient operation from your product. USG Brushes are doing an efficient job for manufacturers of appliances, hand tools, fans, and similar units. To check your specifications with our materials, write for our new Catalog B-56 and the new USG Grade List . . . you'll find them a great help in designing.

221

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICH.

NEW SPEED-VERSATILITY ON CONVEYOR LINE

MARKING . . . CODING . . . DATING



Versa-Matic CONVEYOR LINE MARKER

Automatically imprints changeable data on wood or paper cartons, cloth or paper sacks, rolls, cans, packages and other containers. New chain driven inkers assure even ink distribution and finest impression. Trouble free operation at fast production line speeds. Interchangeable rubber type printing area 1" to 4" high—13" to 18" length. Quickest and easiest copy changes and unit adjustments. Shaft and bracket furnished with each unit.

10 day free trial

FORCE WESTERN INC.
434 S. WABASH AVE. CHICAGO 5, ILL.

▲ For more details circle NED-73 M8 on enclosed inquiry slip ▲

Allflex

STAINLESS STEEL "MNH" FLEXIBLE CONNECTORS

A NEW stock answer to pipe-line problems caused by rigid connections.

- Dampens Vibration
- Compensates for Misalignment
- Permits Offset Movement
- Absorbs Expansion

With ALLFLEX Stainless Steel Connectors you get:

- **Corrosion Resistance**...plus
- **Pressure Resistance**...plus
- **Heat Resistance**...plus
- **Flexibility**

Also available in Monel, Bronze and Steel.

These Stock Sizes

¼" ⅜" ½" ¾"
1" 1¼" 1½" 2"

In These Stock Lengths

12" 18" 24" 30"
36" 48" 60"

. . . also available in all standard sizes, in any required length, with any standard or special fitting or flange. Full engineering information on ALLFLEX Stainless Steel Hose can be found in: Chemical Engineering Catalog, pages 153 to 156; Refinery Catalog, pages 169 to 172. (Allied A, B, C, D.) ALLFLEX Standard Stainless Steel Connectors are sold through leading Industrial Distributors. If not available locally—THEY CAN BE SHIPPED FROM FACTORY SAME DAY ORDER IS RECEIVED.

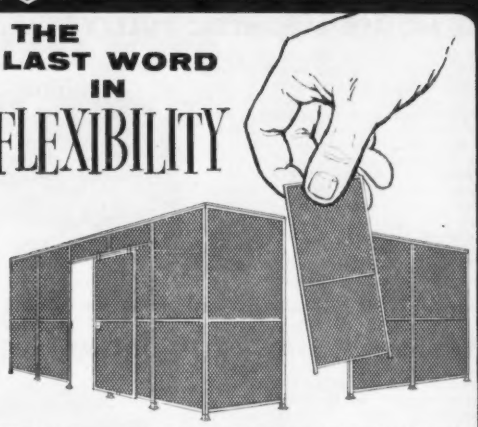
Write Today for Fact-Filled Allflex Bulletin

ALLIED METAL HOSE CO.
3768 Ninth Street • Long Island City 1, N. Y. • STillwell 4-5173

▲ For more details circle NED-74 M8 on enclosed inquiry slip ▲

WIPCO WIRE PARTITIONS

THE LAST WORD IN FLEXIBILITY



WIPCO woven-steel wire partitions are designed to fit any area, regardless of height, location of doors and other openings, etc. Easy and economical to erect, your own men can put them up without outside help! Use them over and over again, salvaging each individual section for use in new erections. Available in *standard* sections from stock—or *custom-built* for any requirement, WIPCO partitions are easy to paint and clean—require little or no maintenance! For increased efficiency and flexibility at lower cost, get the facts on WIPCO wire partitions!

Write Today for Bulletin P-55!
WIRE & IRON PRODUCTS INC.
1727 SIXTEENTH STREET, DETROIT 16, MICHIGAN
▲ For more details circle NED-75 M8 on enclosed inquiry slip ▲

Automatic Feeding for punch press profit!

Short run jobs—produced with long-run economy on the new U. S. SLIDE FEEDS.

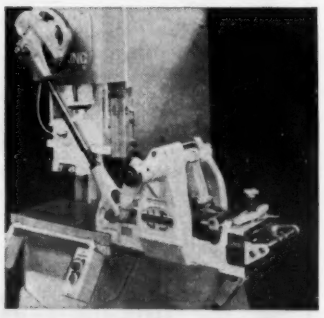
NEW U. S. SLIDE FEED features reduce press room costs . . . increase production because . . .

1. LESS TIME NEEDED FOR CHANGEOVER.
2. QUICK, VISUAL FEED LENGTH SETTING.
3. SIMPLE STOCK THICKNESS ADJUSTMENT.
4. UNSURPASSED ACCURACY—WITH OR WITHOUT PILOTS.
5. MORE POSITIVE CHECK.

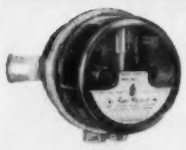
The U. S. Slide Feed, Model S. F.-68A, illustrated here, feeds stock widths up to 6" and has a maximum feed length stroke of 8". Available for immediate delivery.

For complete information about the new U. S. Slide Feeds, write for Bulletin No. 101. Information concerning other U. S. Press Room equipment is yours by asking for Bulletin No. 85N.

write for details to dept. 58-J 6.



U.S. TOOL COMPANY, INC.
AMPERE (EAST ORANGE) NEW JERSEY
U. S. Multi-Sliders® • U. S. Multi-Millers® • U. S. Automatic Press Room Equipment • U. S. Die Sets and Accessories
▲ For more details circle NED-76 M8 on enclosed inquiry slip ▲



63300C

PHOTOELECTRIC CONTROLS for OUTDOOR LIGHTING

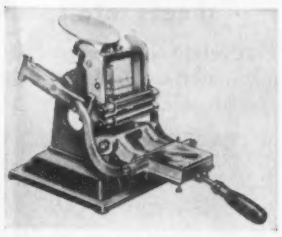
64401

Fisher-Pierce photoelectric controls provide dependable, automatic control of lights regardless of time of day, season or weather. Lights are switched on at the same daylight value each day, off when daylight returns. Non-mechanical, they never need setting or re-setting, even after power failures. The basic F-P circuit has proven dependable, rugged and trouble-free by more than nine years' use, in controlling lights on aircraft obstructions, signs and in store windows; in parking, loading and storage areas; in street lighting and other installations. Load capacities from 300 to 6000 watts; integral and auxiliary protective devices; wide variety of mounting arrangements; SPST, SPDT, DPST contacts; turn-on settings from 1 to 500 foot-candles.

Write for descriptive bulletins, outlining your requirements.

THE FISHER-PIERCE CO., INC.
86 PEARL STREET, BOSTON 85, MASS.
▲ For more details circle NED-77 M8 on enclosed inquiry slip ▲

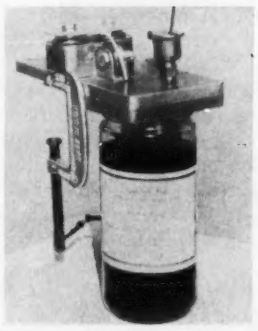
HAND PRINTER
marks curved, irregular surfaces



From 300 to more than 800 cylindrical or uneven-surfaced parts can be marked per hour with this Speedboy hand-operated printing machine. Standard and made-to-order imprint dies are available for any desired copy or pattern, and changing of dies takes but a few seconds. Made by **Krengel Mfg. Co.**, 227 Fulton St., New York 7, N. Y.

▲ For more details circle NED-78 M8 on enclosed inquiry slip ▲

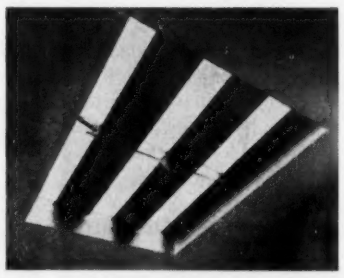
WIRE COLOR CODING MACHINE
capable of speeds to 500 fpm



Any vinyl insulated wire can be dyed immediately to any one of nine colors at speeds up to 500 fpm by the Model 701 Spectra-Coder. The color-coding machine is used in conjunction with Spectra-Ink, or any other instant drying ink. It is particularly useful for color coding shielded and jacketed wire and the smaller size coaxial lines. Apparatus can be used to convert obsolete striped wire to a solid color. Made by **Spectra-Strip Wire & Cable Corp.**, Box 415, Garden Grove, Calif.

▲ For more details circle NED-79 M8 on enclosed inquiry slip ▲

SKYLIGHT-VENTILATOR
is fitted with translucent dampers



This Lite-'n-Aire gravity roof ventilator doubles as a skylight. It has translucent glass-fiber reinforced plastic dampers and gutters that admit natural light. It is strong, nonwarping, and resistant to damage from chemicals and fumes. Whether open or closed, light is well diffused. Unit frequently provides adequate light for many daytime applications. Each 7½ x 10-ft unit affords 30 sq ft of free air opening to move large volumes of air quietly and efficiently. A UL-approved fusible link mechanism automatically opens the dampers when the temperature exceeds 212° F, to vent fire, smoke, and gases as a safety measure. Made by **Swartwout Co.**, 18511 Euclid Ave., Cleveland 12, Ohio.

▲ For more details circle NED-80 M8 on enclosed inquiry slip ▲

Try this PORTABLE
METAL-CUTTING BAND SAW!

It's a wow on both ferrous and non-ferrous metals—even tough stainless steels, tool steel, nickel-based alloy and other problem materials. And *fast!* Handles 3¼" x 4¼" rectangular stock, ¾"-diameter. Well balanced and easy to handle, even inexperienced operators can use it. Equipped with ball and needle bearings and 6.5 amp Universal motor. Blade moves at 240 SFPM. The ideal timesaver in any shop where metal-cutting is necessary. Ask your Porter-Cable dealer or write for a demonstration.

Porter-Cable
Quality Power Tools

PORTER-CABLE MACHINE COMPANY
812B Marcellus Street
Syracuse 4, N. Y.
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Get SQUARE D VISIBLE BLADE SAFETY SWITCHES via Graybar
and SEE when you're safe!

No question about it when the new Square D Visible Blade Safety Switch is open. You can SEE at a glance. All Square D Safety Switches have spring loaded fuse clips, too. They maintain positive contact as fuses alternately heat and cool.

For complete information contact your nearest Graybar office, or the address below. Graybar people at over 130 principal cities are ready and anxious to help you with any motor control problem you have. 86

GRAYBAR ELECTRIC COMPANY, INC.
420 Lexington Avenue, New York 17, N. Y.

Call Graybar *first* for . . .
IN OVER 130 PRINCIPAL CITIES

Everything Electrical GraybaR ELECTRIC COMPANY

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LIFTS and PULLS at ANY angle . . .

Move machinery, pull boiler tubes, join belts, set pipe, lift motors—for 1001 uses pick up a

CM PULLER

¾ TON MODEL WEIGHS ONLY 13 LBS.

● Operated by a ratchet handle requiring no more effort than an automobile jack. Objects up to 12,000 lbs. can be lifted or pulled . . . vertically, horizontally or at any angle. Anyone can operate. Automatic brake holds loads at any point. Inexpensive. Sturdy. Safe. CM-Alloy flexible welded load chain.

Send for PULLER Bulletin 146 Illustrated and with prices.

Capacities: ¾ to 6 ton

CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND
In Canada: McKinnon Columbus Chain Limited, St. Catharines, Ontario
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KODAGRAPH MICRO-FILE EQUIPMENT

Here's everything you need for a low-cost, trouble-free microfilming operation . . . one that will meet *your* individual requirements.

● **Kodagraph Micro-File Machines**—three separate models designed to meet a variety of conditions. *Each* a high-precision unit which can be operated by anyone.

● **Kodagraph Micro-File Film**—extremely fine grained, high resolution. Assures sharp, crisp rendering of all details.

● **Kodagraph Film Readers,** which permit you to view your films quickly, conveniently.

● **Kodagraph Micro-File Enlarger,** which enables you to make paper enlargements from 16mm. and 35mm. microfilms which are comparable in clarity to the originals.

● **Kodagraph Print Film**—ideal for making positive copies of negative microfilm records.

Write today *for new booklet—"Kodagraph microfilming for new economies in record keeping."*

EASTMAN KODAK COMPANY
Graphic Reproduction Sales Div.
Rochester 4, N. Y.

Kodak
▲ For more details circle NED-84 M8 on enclosed inquiry slip ▲

Here is a handful of ELASTIC STOP® nuts. Each has ESNA's familiar red locking collar*. . . is vibration-proof and made of the finest materials. Each is exactly controlled as to finished dimensions, class of thread fit and finish . . . with an unmatched record for uniformly high quality. **Most of them are standard parts . . .** some originated as a result of a specific request for ESNA's assistance. So . . . for help on *your* next fastening problem, send us the details of your application. Write Dept. S1-1237.

**The red locking collar is a Registered Trade Mark of ESNA.*

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, New Jersey

▲ For more details circle **NED-86 M8** on enclosed inquiry slip ▲

"Bear Dy-Namic Balancing meets our requirements at reasonable cost, with utmost simplicity of operation," says Russell Hogin, Mfg. Div. Staff Asst., Goss Printing Press Co., where this Bear #400R Machine is used to balance plate, impression and folding cylinders, and ink drums.

FREE DY-NAMIC BALANCING CATALOG sent without obligation. Bear Mfg. Co., Dept. N-5, Rock Island, Illinois.

There's little room for "play" or vibration between rollers and cylinders on today's high-speed presses. It takes close-tolerance manufacture and top-quality control . . . without losing sight of production costs! That's why Bear Dy-Namic Balancing is a regular part of production at precision-conscious firms. Whether your problem is to cut down vibration, noise or bearing wear Bear will improve your product, too.

BEAR
STATIC AND DY-NAMIC BALANCING MACHINES

▲ For more details circle **NED-87 M8** on enclosed inquiry slip ▲

Features information* NEVER AVAILABLE BEFORE *in slide chart form

For the first time, with slide chart ease, convenience, and accuracy, you can put your finger quickly on a host of facts such as speeds and feeds for machining, drilling and threading stainless steels.

Second side is an up-to-date version of Carpenter's earlier issue Slide Chart. Contains all you need know to select the proper stainless for drawing, forging, heading, welding, roll forming, etc. Get your copy of this pocket-size reference today!

THE CARPENTER STEEL COMPANY
118 W. Bern St., Reading, Pa.

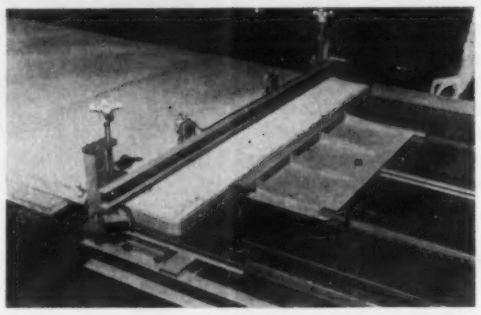
Please send me a copy of your new Carpenter Stainless Slide Chart. (Please print)

Company Name_____
Individual Name_____ Title_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle **NED-88 M8** on enclosed inquiry slip ▲

SHEET MATERIALS BAG LOADER packs plywood, wallboard, plastic sheets into special paper bags

The relatively new concept of packaging sheet building materials in paper bags is opened up with development of this building materials bag loader. Bags



constitute a complete package, eliminating separate inventories of containers, sheets or rolls of paper, cartons, staples, and lables.

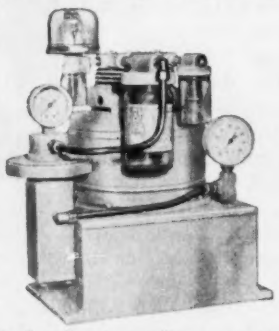
Loader consists of a horizontal sheet-metal bed mounted on a steel frame. A motor-powered ram pushes the stacked material into a specially dimensioned paper bag secured to the loader mouth. Ram, in its last few inches of travel, pushes the loaded bag onto a conveying table where it is closed and sealed by glue or tape. Ram automatically returns to starting position.

Mechanical or manual operation is available. Some products can be bagged at speeds of up to 8 bundles per minute. One machine will package several widths of materials, and can be adjusted instantly for package thickness. Made by **Bemis Bro. Bag Co.**, 408 Pine St., St. Louis 2, Mo.

▲ For more details circle **NED-89 M8** on enclosed inquiry slip ▲

WEB GUIDE for accurate side register

Sufficient power to move even the heaviest unwind or rewind rolls is developed by the Model P-H 55 hydraulic web guide, designed to accurately control side register within ±0.010 in. It can be used on such web - fed operations as coating, laminating, slitting, printing, calendering, and bag-making. Its highly sensitive pneumatic - hydraulic automatic pilot receives the signal of any deviation in the web path from the sensing head, translating it into corrective action of the hydraulic power cylinder for immediate repositioning of the web. Guide unit is available in combinations of size and power to fit all web processing requirements. Made by **Stanford Engineering Co.**, Salem, Ill.



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NEW
LOW COST
LEAK DETECTOR

NRC Model 4902 detects and locates leaks as small as 10^{-6} standard c.c. per second. It is the first commercially available halogen-sensitive leak detector to have the stability and fast recovery time needed to assure reliable results. Operates in the 80-200 micron pressure range. Readily available Freon-12 is used as tracer.

It is useful for locating leaks in vacuum and pressure vessels, as well as for such products as auto-radiators, water buckets, hydraulic systems, and hermetically sealed components and assemblies.

NRC EQUIPMENT CORPORATION

Write today for Bulletin LD-1
Department 29-Z
NRC Equipment Corporation
160 Charlemont Street
Newton 61, Mass.
A subsidiary of National Research Corporation

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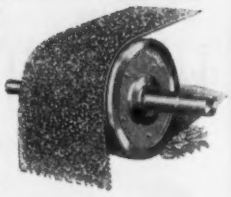
2 WAYS TO REDUCE COSTS

USE HOMER MAGNETIC PULLEYS . . .

Homer Permanent Magnetic Pulleys in belt conveying systems cut costs in a multitude of metal-working operations. They automatically remove tramp iron from coke, slag, ores, foundry sand, etc . . . sort ferrous from non-ferrous parts . . . and segregate ferrous from non-ferrous materials, minerals, etc. Trouble-free with no D.C. power supply required. Homer's "Radial Pole Design" assures highest magnetic strength across entire working face of pulley for deep, effective penetration and positive control of magnetic materials.



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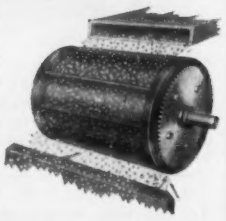
USE HOMER MAGNETIC DRUMS . . .

Homer Permanent Magnetic Drums automatically and economically beneficiate ores . . . remove tramp iron from slag, coke, foundry sand, ores, etc. . . . and separate ferrous parts from abrasive material following tumbling barrel operations. For installation at discharge end of gravity, screw or belt conveying systems and for use with tumbling barrels. Homer's "Radial Pole Design," with permanence of magnetic strength guaranteed, assures maximum effectiveness at all times.



Complete details in Bulletin MD-200. Write for it today.

HOMER MANUFACTURING DIVISION
THE OHIO ELECTRIC MANUFACTURING CO.
DEPT. 124 • LIMA, OHIO

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ONE SOURCE SERVICE
for
OIL SEALS
RUBBER PARTS
LEATHER BELTING
AND PACKINGS

CHICAGO-ALLIS offers complete laboratory, engineering and manufacturing facilities for creating finest quality products to meet even your most critical needs.

For molded rubber parts, shaft or face seals, packings, mechanical leathers, or power transmission belting, contact your CHICAGO-ALLIS representative.

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Producers of CHICAGO BELTING • ALLIS RUBBER • ALLIS SEAL Products
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VAPOR-LUB COOLING

REFRIGERATES FOR FASTER WORK—LONGER TOOL LIFE

Unlike liquid coolant systems, VAPOR-LUB refrigerates and lubricates entire cutting area for maximum efficiency. By sudden expansion of compressed air through a precision nozzle, temperatures are reduced in cutting area up to 20°F below ambient. In addition, an atomized coolant spray is deposited on tool and work to lubricate and reduce frictional heat. VAPOR-LUB is clean, simple, and economical—requires no special plumbing or coolant pans. Available with single or multiple jet nozzles. Single nozzle units, $47.50 complete; two nozzle units, $69.50. Send for FREE information.

Precise
Power Quills Grinder Millers Milling Machines Accessories Cutting Tools Vapor-Lub Cooling Systems
Quality and Precision Since 1882

PRECISE PRODUCTS CORPORATION
3752 BLUE RIVER ROAD, RACINE, WISCONSIN, U.S.A.
BRANCH PLANT: PRECISE G.m.b.H., DUESSELDORF, GERMANY

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LINK-BELT Conveyor TROLLEYS

Ten reasons why they last longer

1. **WHEELS** machined from steel tubing are carburized and heat treated.
2. **BALLS** are high grade steel.
3. **CAGE** spaces balls accurately—minimizes friction.
4. **RACEWAYS** are precision-ground for free rolling action, high capacity.
5. **LARGE LUBRICANT SPACE** extends servicing schedules.
6. **END CLOSURES** fit tightly, prevent escape of lubricant.
7. **BOLT OR RIVET** is machined for tight press fit.
8. **PRESSURE TYPE GREASE FITTING** for fast, easy lubrication.
9. **LABYRINTH SEALS** are frictionless; keep lubricant in, dirt out.
10. **FORGED STEEL BRACKET** provides maximum strength.

RIVETED (shown) or BOLTED models

Book 2636 gives full details. Send for your copy today.

LINK-BELT

BALL BEARING CONVEYOR TROLLEYS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office: New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,794

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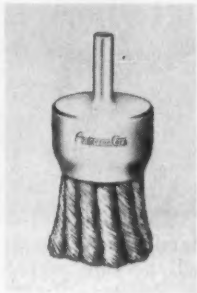
END BRUSH
has tightly wound, twisted wires



This end brush now features a one-piece stem and cup and a one-piece swaged core. These give rigidity to the wire sections and prevent flaring under the pressure of heavy duty cleaning. Construction also makes possible tight winding of the spiral twist wires, thereby extending brush life. The one-piece cup and stem assures operator safety at high speeds. Made by **Anderson Corp.**, 1028 Southbridge St., Worcester 10, Mass.

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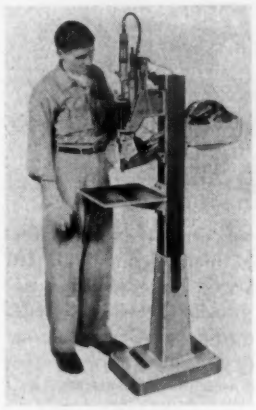
SCREW & NUT DRIVER
torque accurate to 5 per cent



Auto-Torque screw and nut driver consists of a previously announced parts positioner head, a compact air motor drive for the spindle, and an automatic parts feeder. A built-in adjustable torque clutch, accurate within 5 per cent of its setting, is furnished in two torque ranges: 5 oz-in. to 84 lb-in. and 48 to 120 lb-in. The simple parts feeder is powered by a double-acting air cylinder which actuates both the feeder drum and the shuttle type escapement. A sensing device stops the machine if a part is missing or only partially driven. Screws and nuts from No. 4 to 5/16 in. diameter can be handled. Driver can be furnished with floor mount and foot treadle or as a completely automatic station with electrical connections and solenoid valve to automatically initiate the cycle. Made by **Dixon Automatic Tool, Inc.**, 2300 23rd Ave., Rockford, Ill.

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INDIA INK ERASER
does not damage tracing paper, cloth

India ink can be erased from the surface of tracing cloth, tracing paper, or other hard-surfaced papers with the No. 138 Ball Point eraser. It does not damage the

tracing surface, making redrawing easy and free from feathering. Paper-wrapped and pencil-shaped, it is easy to hold and repoint by pulling a string to release paper windings. Made by **Weldon Roberts Rubber Co.**, 351-365 Sixth Ave., Newark 7, N. J.

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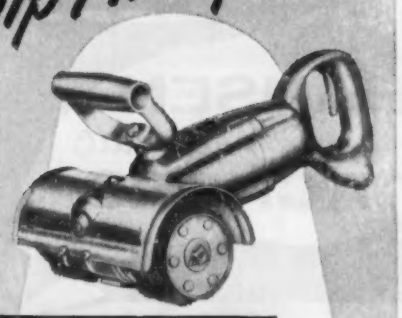
Chip Away



SCALE
RUST
PAINT

AURAND
CLEANING TOOLS
ELECTRIC OR PNEUMATIC MODELS

Surfaces are cleaned quickly with AURAND on the job. Hardened steel cutters zip away stubborn accumulations from iron, steel, brick, concrete. Adjustable depth shoe protects surface . . . assures uniform cleaning. No special skill required. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write for complete details

AURAND MFG. & EQUIPMENT CO.
1322 Ellis St., Cincinnati 23, Ohio

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FOR THOSE HARD - TO - REACH TURNINGS

NYE CHAIN WRENCH

SAVES TIME • EASES WORK

Perfect for work against walls, in corners, on parallel pipes. Needs less than 5/8" clearance. Takes positive grip. Solidly built. Forged alloy handle. Saves a lot of time on the job. Order today.

TURNS ANY SHAPE

Round, square, hexagonal or octagonal, bars, pipe, conduit. No crushing.

Ratchet action takes each new bite without removing wrench from work.

NYE TOOL COMPANY
4126 WEST FULLERTON AVE., CHICAGO 39, ILLINOIS

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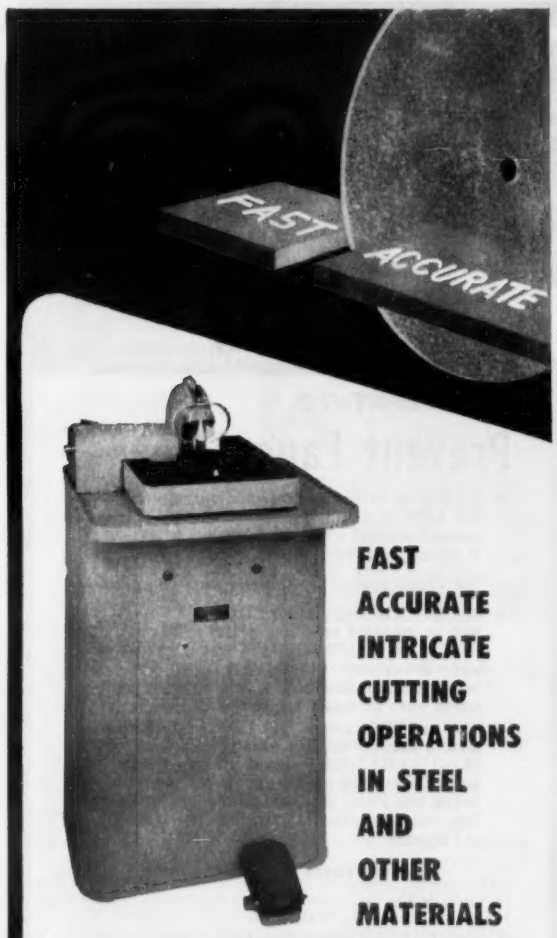

FAST ACCURATE INTRICATE CUTTING OPERATIONS IN STEEL AND OTHER MATERIALS

Aminco's CUTTING-OFF MACHINE cuts steels and other metals, glass, stone, plastic and quartz quickly and accurately. Applicable to every type of industrial and laboratory installation, the unit is simple to operate, even for unskilled personnel. Special features include a miter gage & scale; foot-operated control; spray heads that play a steady stream of coolant to cutting wheel; adjustable stop to permit cutting of exact duplicate pieces; cutting table mounted on ball bearings; bonded, abrasive cutting wheel, 12 in. in diameter; models available for 115, 230 and 440 volts.

5-2416 Cutting-off Machine, 115 volts, 60-cycle, single phase, 1½ h.p. motor, size: 25 x 25 x 48 inches high $673

Full Information in **Bulletin 2237-U2**
Free upon request

American Instrument Co., Inc.
8030 Georgia Ave., Silver Spring, Maryland

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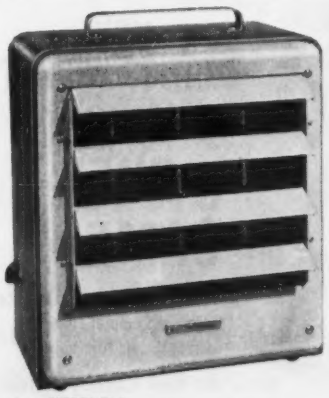

MODEL CI-5
Easily portable or may be suspended on swivel-type brackets. Has rubber bumpers on base.

NEW ELECTROMODE All-Electric
COMMERCIAL and INDUSTRIAL HEATER

CAPACITY To Meet The Needs of Industry
Model CI-5—5 KW—17,075 BTU
Model CI-10—10 KW—34,150 BTU

APPEARANCE To Meet The Public
Styled Like Electromode Modern Domestic Line
Tutone Gray and Ivory Baked-on Enamel Finish

This new Electromode Heater is specifically designed for quick, comfortable warmth in stores, "gas" stations, offices, and similar places where its handsome appearance and quiet operation are an asset. Simple plug-in operation is permitted since the heater has a built-in thermostat. Also made in non-automatic models. The CI-10 model (*not illustrated*) is basically two 5 kilowatt units fixed side by side, each retaining its thermostatic control. By setting one thermostat higher than the other on this model, only half the unit need be placed in operation, drawing a lower current load. When temperatures demand it, the other unit automatically cuts into operation.

SAFE!

The C and I Heaters have the exclusive Safety Grid heating element, giving them the complete safety for which Electromode heaters have been famous for more than 30 years. No danger of fire, shock or burn.

ELECTROMODE
Division Of
COMMERCIAL CONTROLS CORPORATION

WRITE TODAY For:
New literature with complete specifications, description, illustrations, and installation instructions.

Dept. NED-58
570 Culver Road, Rochester 3, N. Y.

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ZIP-TACK-GO!

HANSEN Automatic TACKERS

36 MODELS 80 STAPLE SIZES

Fast, dependable, sure . . . Hansen Tackers make tacking a pleasure on all kinds of jobs. Be sure of getting the best . . . choose a Hansen Tacker now!

For Labeling, Displays, Insulation, Decoration, Assembly Work . . . many others

WRITE today for free Hansen booklet.

A. L. HANSEN MFG. CO.

5164 Ravenswood Avenue • Chicago 40, Illinois

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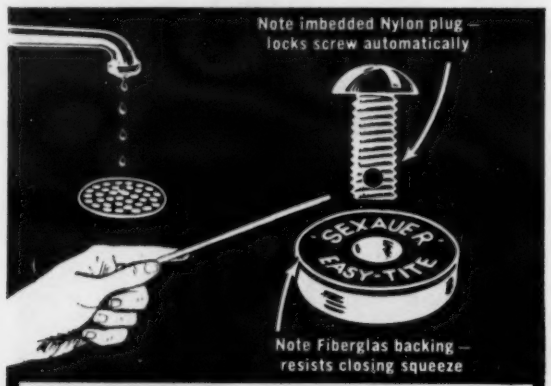


NEW WAY TO

Prevent Faucet Leaks!

★ 9 out of 10 washers are fastened with screws that are TOO LONG or SHORT. The screws quickly loosen; the loosened washers are destroyed thru grind and squeeze of opening and closing faucets.

34 years of research uncovers new solution

★ Now, NEW (Patented) 'Sexauer' SELF-LOCK Monel screws, with an imbedded expanding NYLON PLUG, lock at the required depth AUTOMATICALLY, hold washers FIRMLY! Made of rustproof, non-corroding Monel, heads don't twist off, screw slots don't distort. They are easily removed when necessary, can be re-used repeatedly.

★ Used with NEW 'Sexauer' EASY-TITE faucet washers, they make a combination that outlasts past faucet repairs "6-to-1"! EASY-TITES are made of super-tough, pliable du Pont compound (neither rubber nor fibre) and reinforced, like a tire, with a vulcanized layer of Fiberglas. They resist distortion and splitting from shut-off grind and squeeze.

Hidden costs of faucet leaks!

Faucet leaks are costly! As authenticated by Hackensack, N. J. Water Co. and American Gas Association, stopping just ONE PIN-HOLE SIZE (1/32") LEAK can reduce water waste 8,000 gal. quarterly. If a HOT WATER FAUCET LEAK, water and fuel savings JUMP to over $7.58 QUARTERLY—plus additional savings on MATERIALS, LABOR and costly FIXTURE REPLACEMENTS!

NEW SELF-LOCK screws and EASY-TITE faucet washers are just TWO of the "SEXAUER" line of over 3000 TRIPLE-WEAR plumbing repair parts and Pat'd. precision tools.

A "SEXAUER" Technician in your vicinity will make our NEW 126 page Catalog "H" available. He will gladly consult with you regarding a SURVEY of your plumbing fixtures to determine correct repair parts required and establish reasonable stock levels that avoid both overstocking and shortages—thus providing for efficient stock arrangement and control—all without obligation. WRITE TODAY!

J. A. Sexauer Mfg. Co., Inc., Dept. AU-128
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your NEW, 126 page catalog "H."*

My Name_____ Title_____

Company or Institution_____

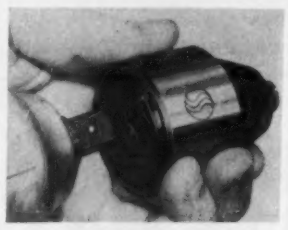
City_____ Zone____ State____

SEXAUER

WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-104 M8 on enclosed inquiry slip

IMPACT WRENCH CHUCK converts wrench to drilling tool



Powerful impact wrenches can be made into heavy duty drilling tools with this Supreme impact wrench chuck. It fits all ½-in. square drive tools and holds ⅛ to ½-in. drills. Gripping action is keyless. Chuck will withstand the shock created by impact power tools, yet will operate accurately and with little care. Made by **Supreme Products Corp.**, 2222 S. Calumet Ave., Chicago 16, Ill.

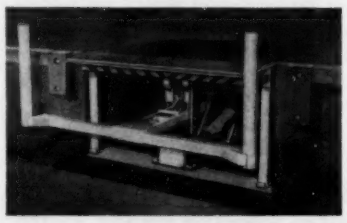
For more details circle NED-105 M8 on enclosed inquiry slip

PRESS-ON NAMEPLATES furnished in any commercial metal

A wide selection of deep set colors and an almost unlimited choice of shapes and sizes are available in these pressure-sensitive nameplates. They feature sharp clarity and are processed against fading, or weather and scratch damage. They will not chip or craze. Nameplates are available in any commercial metal from 0.003 to 0.006 in. thick. They are also well suited for use as panel and dial facings where precise detail and legibility are essential. Made by **Dickey-Grabler Co.**, 10302 Madison Ave., Cleveland 2, Ohio.

For more details circle NED-106 M8 on enclosed inquiry slip

DOCK LEVELING RAMP is actuated by backing truck

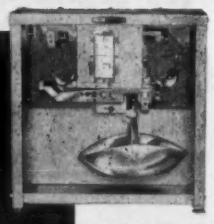


Operated and counterbalanced by a parallelogram spring and cam mechanism, this automatic dock leveling ramp returns and locks to a horizontal dock level when not in use. Two bumper bars, one on each side, are swivel connected to actuate the ramp mechanism, even if the carrier backs up slightly aslant. Ramp raises on first contact with backing truck, and it then descends slowly to rest on bed or carrier where it remains in contact regardless of truck's rise or fall during loading or unloading. The 6 x 8-ft ramp moves through a 27-degree arc, and it can tilt 4 in. right or left. As soon as the carrier moves away from the dock, the ramp lifts and then returns to dock level automatically. Capacity is 20,000 lb. Made by **Globe Hoist Co.**, E. Mermaid Lane at Queen Street, Philadelphia 18, Pa.

For more details circle NED-107 M8 on enclosed inquiry slip

Another PENNSYLVANIA First

A LOW COST Electric DOUBLE RATIO COUNTING SCALE



MODEL C-500 PENNOGRAPH 5 lb. capacity Ratios: 99:1 and 9:1 100:1 and 10:1

PENNSYLVANIA QUALITY at a NEW LOW COST

For counting extremely small parts in predetermined or unknown quantities, the new Model C-500 is the most economical scale on the market. Scale features new optical projection indication system, lightening fast action and interchangeable parts for either 200 milligram or 500 milligram sensitivities.

- Counting Scales
- Over/Under Scales
- Fan Dial Scales
- Food Scales
- Grain & Dockage Scales
- Industrial Scales
- Laboratory Scales
- Special Purpose Scales

Golden Anniversary 1908 1958 PENNSYLVANIA SCALE COMPANY BAREVILLE, PA.

PENNSYLVANIA SCALES

Pennsylvania Scale Company, Bareville, Pa.

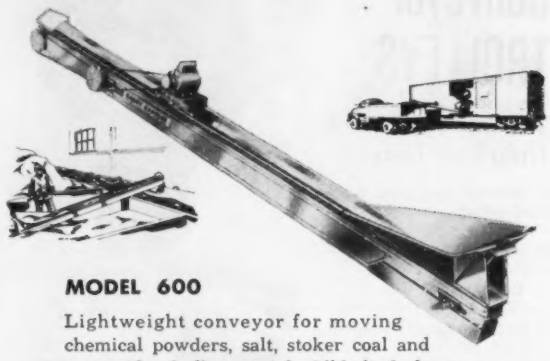
FREE BOOKLET

Don't let hand counting or incorrect counting scales waste your money. Write for copy of "Counting Scale Cost Savings Report" . . . explains procedures and gives valuable tips.

For more details circle NED-108 M8 on enclosed inquiry slip

BELT HANDY-HANDLERS

MEANS TOP VALUE AND UTILITY



MODEL 600

Lightweight conveyor for moving chemical powders, salt, stoker coal and many other bulk materials. All bolted, aluminum frame construction for easy maintenance and servicing. Easily adapted. Easy one-man operation and positioning. Lengths from 10 to 28 feet. Write for complete conveyor catalog.

Prices range from $300.00.

THE BELT CORPORATION

8888 Stahl Road Orient, Ohio

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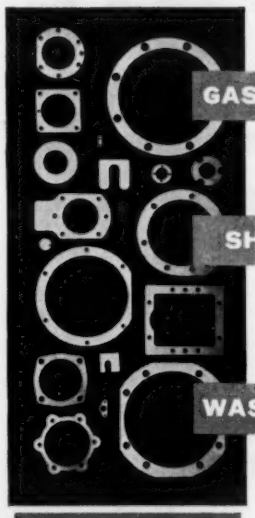
No Order TOO SMALL... or TOO BIG!



With more than 50 years' accumulation of dies, chances are we can furnish the gaskets, shims, or washers you need . . . *without a die charge.* This can cut your cost and speed delivery—whether you need just a few items or large quantities. Gaskets, shims, washers or special stampings are available in metallic, non-metallic and plastics to meet your production requirements.

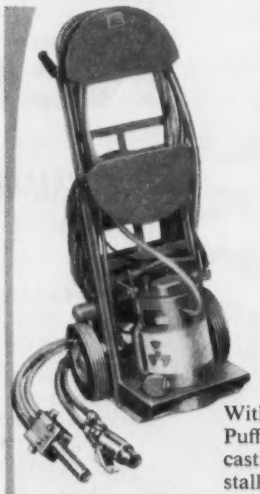
NOW . . . WIL-PAK PLASTIC SHIM STOCK with thickness identified by color and gauge number. Write for Bulletin No. 570.

Write for Catalog and prices

CHICAGO-WILCOX Mfg. Co.

7713 South Avalon Avenue Chicago 19, Illinois

For more details circle NED-110 M8 on enclosed inquiry slip



NEW CURTISS-WRIGHT radiographic PUFF CAMERA

Rapid source advance to remote areas . . . Complete operator safety . . . No film fogging

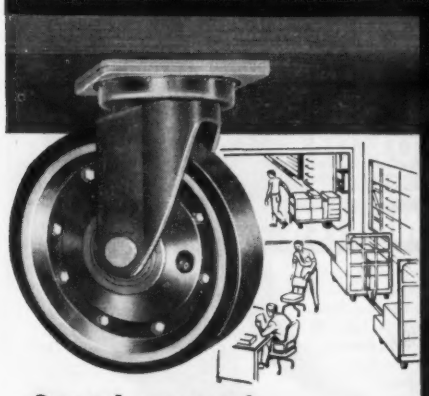
With the new Curtiss-Wright Puff Camera, pressure vessels, castings, ship holds, nuclear installations, pipe lines and other critical structures can be radiographed with high strength sources from remote locations with complete operator safety.

The flexible steel reinforced tubing and small source head can be introduced through small openings and can be coiled up like a garden hose if necessary. The source can be exposed from a distance of 100 feet in less than 2 seconds at the press of a button. **Also general-purpose, external pipe line, and other radiographic cameras. Write for details.**

PRINCETON DIVISION CURTISS-WRIGHT CORPORATION • PRINCETON, N. J.

For more details circle NED-111 M8 on enclosed inquiry slip

Replace with Colson Casters



Speed up work . . .
Eliminate breakdowns
Save floor damage

Send for new Colson catalog C101 . . . contains over 2000 job rated test proven money saving Casters.

Contact your local representative or distributor or write to
The Colson Corporation
Jonesboro, Arkansas
A subsidiary of
Great American Industries, Inc., Elyria, Ohio

For more details circle NED-112 M8 on enclosed inquiry slip

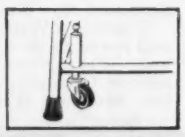
NEW . . . PYRAMID DESIGN INCREASES STABILITY AND SAFETY OF BALLYMORE ALUMINUM Safety-Step LADDERS

SANITARY • EASY TO CLEAN • LIGHTWEIGHT • EASY-ROLLING

New pyramid design Ballymore Aluminum Ladders give the user greater safety and a secure feeling. Construction is tough, reinforced, all-welded aluminum tubing. There are no rivets, bolts or screws to loosen or lose.

12 MODELS TO CHOOSE FROM. Safety handrails are optional on 2-, 3- and 4-step models, standard on 5-step ladders. Steps are made of solid, slip-proof ribbed aluminum tread.

Fingertip mobility is provided by large, smooth-rolling casters which retract under the user's weight.

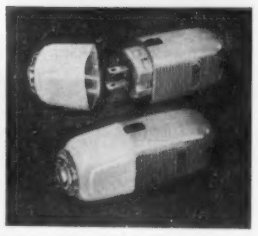


Write for illustrated folder containing complete information. Ballymore Company, West Chester 3, Pa.

BALLYMORE
EQUIPMENT FOR ABOVE-FLOOR WORKING SAFETY
THE STANDARD BY WHICH ABOVE-FLOOR SAFETY IS JUDGED
DISTRIBUTORS IN PRINCIPAL CITIES

For more details circle NED-113 M8 on enclosed inquiry slip

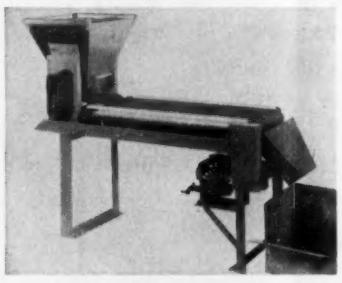
RECHARGEABLE FLASHLIGHT
operates for hours on one charge



Ordinary batteries are not required by this rechargeable flashlight which is simply plugged into any 110-v ac outlet to recharge. It throws a strong, bright beam and will operate continuously for several hours on one charging. The plastic case measures 4½ in. long and weighs only 4 oz. Individual list price is $5.95. Made by **Edwin W. Lane Co.**, 32 W. Randolph St., Chicago 1, Ill.

For more details circle NED-115 M8 on enclosed inquiry slip

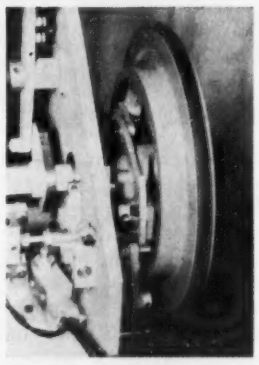
INSPECTION TABLE
short model seats two operators



Short model of the Goodman inspection table for inspection of small parts will seat two operators and occupies only 6 x 2 ft of floor space. A 2-cu ft stainless steel hopper supplies a vibratory feed mechanism which evenly distributes parts across the work belt. Speed of belt is variable from 10 to 20 fpm. Other speed ranges are also available. The 15-in. wide belt has a 36-in. long working surface and is flanked by 4½ in. aprons. Unit stands 4 ft 4 in. high. Made by **G. F. Goodman & Son**, Dept. 33, 401 Richmond St., Philadelphia 25, Pa.

For more details circle NED-116 M8 on enclosed inquiry slip

SINGLE REVOLUTION CLUTCH
has adjustable torque control



Positive rotation can be given to a standard ¾-in. shaft from a continuously rotating power source by this single-revolution, brake-shoe type clutch which is rated ⅓ hp at 100 rpm. Clutch can be used at speeds up to 150 rpm and features an adjustable torque control. Ball bearing - equipped flywheel lends itself to V-belt, gear, or direct drive and can be mounted at the end or in the middle of the shaft. Clutch has a positive positioning device at disengagement and can be used for clockwise, or counter-clockwise rotation. Shaft sizes from ½ to 1 in. are available. Made by **Theodore M. Wright, Inc.**, Dept. J, Box 286, Camden 1, N. J.

For more details circle NED-117 M8 on enclosed inquiry slip

PORTELVATOR®
The Handy HAMILTON Portable, Elevating Table

5607

NEW DEVELOPMENTS PROVIDE EASY MOVEMENT

MORE SERVICE for LESS MONEY than ANY Other Unit of Equipment

Four-Wheel and Six-Wheel Models

of SHEETS PLATES BARS TUBES PIPES TOOLS DIES FIXTURES ALL COMPACT HEAVY LOADS

4 point support 3 table surfaces

NEW, FREE LITERATURE TELLS ALL! Ask for Bulletin P-5607. Address The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio.

UNOBSTRUCTED PERIMETER • WORK FROM ANY SIDE

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

For more details circle NED-118 M8 on enclosed inquiry slip

REDUCE HEATING COSTS!
CLEAN BOILERS WITH A TORNADO®
JUMBO VACUUM CLEANER

★ 55 GA. CLEANING CAPACITY ON ANY STANDARD DRUM.
★ H. P. FROM ¾ TO 3.
★ HOSE SIZES 1½"-2"-3".

USE YOUR OWN STANDARD 55 GAL. DRUM.

Dirty, soot-clogged boiler tubes can easily double fuel bills.

To call in an outside service to clean your boiler is expensive.

Why not solve boiler problems with a Tornado Jumbo vacuum cleaner. It's actually a powerful motor unit with a cover and filter bag that fits right on any standard 55 gallon drum. (4 Wheel dolly also available.)

We'll supply the proper hose and tools so that this cleaning job will take but a few minutes, and all the soot is right there in the drum to be carried away.

Most users save the full cost of their Tornado Jumbo in a few months, by reduced fuel bills.

What's more you get an extra bonus in the way the Jumbo does numerous other important cleaning jobs too!

START YOUR FUEL SAVINGS NOW!
WRITE FOR JUMBO BULLETIN NO. 899

BREUER ELECTRIC MFG. CO.
5116 NORTH RAVENSWOOD AVENUE, CHICAGO 40, ILLINOIS

Gentlemen:
We would like to reduce our heating costs with improved boiler cleaning. Please have your distributor contact us for a demonstration.

NAME_____
COMPANY_____
STREET_____
CITY_____ ZONE____ STATE_____

Visit Booth 422, Plant Maintenance & Engineering Show, Public Auditorium, Cleveland, Ohio, Jan. 26-29

For more details circle NED-119 M8 on enclosed inquiry slip

AN-100043

AN-100041

AN SERIES
MAGNESIUM ACCESSORY DRIVE
COVER PLATES

SUITABLE FOR STORAGE AND FLIGHT

AN-100036	TYPE XI	AN-100041	TYPE XV
AN-100038	TYPE X	AN-100043	TYPE XII
AN-100039	TYPE XIII	AN-100044	TYPE XVI

TO LATEST SPECIFICATION REVISION (8 JANUARY 1958)

AN-100044

IMMEDIATE DELIVERY . . . LOWEST COST

A complete line of nonferrous bushings, bearings and castings. Cover plates of all kinds our specialty.

BRONZE BEARINGS INC.
AIR FORCE APPROVED PRIME CONTRACTOR
340-344 NORTH AVENUE EAST
CRANFORD, NEW JERSEY

*Complete Dealers and Prime Manufacturers Price Lists Upon Request.

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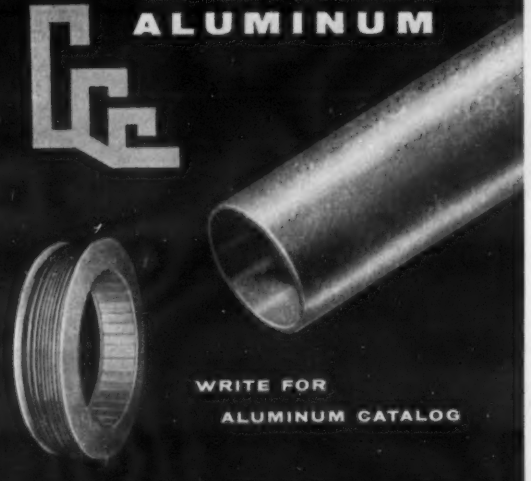
Weight watchers use

WOLVERINE ALUMINUM



WRITE FOR ALUMINUM CATALOG

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17266 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

For more details circle NED-121 M8 on enclosed inquiry slip

UNIVERSAL
SELECT "O" RING KITS

Fills Replacement Needs on 85% of All Industrial Equipment

- 180 "O" Rings in Each Kit — Sizes 1 to 25.
- Patented Plastic Case Shows You "O" Ring Sizes in Kit at a Glance!
- Interchange Data of All Leading "O" Ring Producers in Each Kit — All Manufacturers' Numbers Converted to Universal Numbers.
- Buy Replacement Back-up Washers in these "O" Ring Sizes.

SELECT-O-RING KITS IN VITON . . $124.50
AN 6227 SERIES $59.50

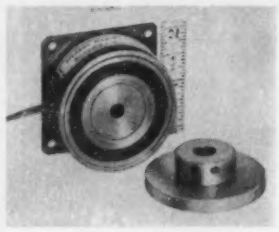
Several Desirable Distributorships Available

BEARINGS, INC.
3631 EUCLID AVENUE, CLEVELAND 15, OHIO
DIXIE BEARINGS, INC.
276 Memorial Drive, S. W. Atlanta, Georgia

BEARINGS, Inc., 3631 Euclid Avenue, Cleveland 15, Ohio
Dear Sir:
Please send us _____ Universal "O" Ring Kits.
Material _____ Price _____
Name _____
Firm _____
Address _____
City _____ Zone _____ State _____

For more details circle NED-122 M8 on enclosed inquiry slip

SMALL MAGNETIC CLUTCH
static torque rating is 30 lb-in.



Having a 2⅛-in. square and 1 9/16 - in. long mounting flange, including armature and driven hub, the Size 2.5 SM clutch is particularly suited for limited space applications. This stationary field, coupling type clutch can be supplied to operate on any voltage up to 90-v dc. Static torque rating is 30 lb-in. Made by **Stearns Electric Corp.**, 120 N. Broadway, Milwaukee 2, Wis.

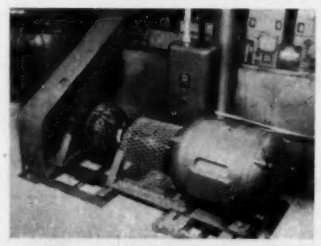
For more details circle NED-123 M8 on enclosed inquiry slip

NAIL DRIVING ADAPTER
speeds nailing in difficult places

Large quantity of nails and spikes can be driven in hard-to-reach places with the aid of this nail driving adapter. Although designed for company's Slugger electric hammer, models are available to fit all power hammers. Adapters are also offered for driving speed nuts, rivets, and other fasteners. Made by **Modern Mfg. Co.**, 680 Davisville Rd., Willow Grove, Pa.

For more details circle NED-124 M8 on enclosed inquiry slip

HYDRAULIC SPEED CONTROL
driven by belt or chain drive



Increase in production and decrease in scrap loss can result from the installation of the Model 333A1 Vari Draulic speed control on various pieces of equipment. The hydraulic unit permits speeds varying from zero to maximum and offers the characteristics of a fluid coupling, along with external control and the ability to de-clutch. It is sealed, self-contained, and may be driven directly by belt or chain drive. In illustrated installation on a cold roll forming mill, the unit is used with a 20-hp motor for driving the stock from 0 to 150 fpm. Slow speed when making adjustments, when starting new coils, or when gage or temper variations are encountered is possible. Drive also minimizes shock on gears and moving parts during inching or threading operations. Made by **Thomas Hydraulic Speed Controls**, 1329 S. McLean Blvd., Wichita, Kans.

For more details circle NED-125 M8 on enclosed inquiry slip

ELECTRIC BIN VIBRATOR

Force of vibration can be varied

Silent operation characterizes this new motor-driven adjustable eccentric vibrator in which eccentric weights are mounted at the two ends. The weights can be closed into a semi-circle for maximum force or opened into a three-quarter circle for minimum vibration. They are held together with a bolt.

Type RC-10, smallest in the line, provides six settings ranging from 140 to 550 lbs. of equivalent impact. Type RC-30 has seven settings from 385 to 1,110 lbs., and Type RC-50 provides a range of 750 to 2,250 lbs., also in seven settings. The eccentrics are protected beneath end covers after they have been set for desired action.

THE CLEVELAND VIBRATOR CO.
K12-2744 Clinton Avenue - Cleveland 10, Ohio

For more details circle NED-126 M8 on enclosed inquiry slip

STOP ELECTRICAL TROUBLES before they begin with the COLUMBIA VOLT-AMMETER

Know how much current your equipment is pulling . . . spot overloads and short-circuits . . . balance loads . . . minimize electrical hazards. Columbia Type AC-1 Volt-Ammeter saves time, gives accurate readings up to 600 amperes and 600 volts on frequencies from 25 to 400 cycles. Conveniently sized, easy to use. Switch allows operator to quickly select AC ranges: 0/12/60/120/600 amperes; 0/150/600 volts. Readings are taken without circuit interruption. Insulated jaws accommodate conductors up to 1½" diameter or bus bars to 2" x ½".

Write today for Bulletin AC-25

$57.50 with Voltage Leads and Carrying Case

Immediate Delivery

COLUMBIA
COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave.
CLEVELAND 14, OHIO

For more details circle NED-127 M8 on enclosed inquiry slip

Simple Design... Rugged Construction

WELLS HORIZONTAL METAL CUTTING BAND SAWS

The simple design and rugged construction of every "Wellsaw" didn't just happen. We planned it that way! Over 30 years of specialized band saw experience and know-how is your assurance of the quality and service with each machine produced by Wells Manufacturing Corporation.

There is a Wells Saw of the right style, capacity and speed to do a better, more economical job for you. Wells Saws will deliver long, dependable service. Operating and maintenance costs are very low. See your Wells Distributor.

Wells

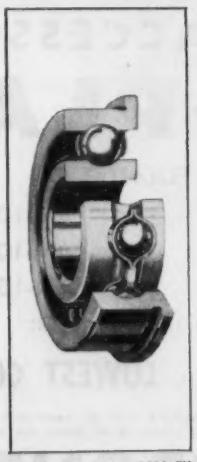
The Pioneers of Horizontal
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 Harding Street Three Rivers, Mich.

For more details circle NED-128 M8 on enclosed inquiry slip

Barden Precision ball bearings

FOR INSTRUMENTS • COMPUTERS AND RECORDERS • AIRCRAFT ACCESSORIES
MACHINE TOOL AND TEXTILE SPINDLES • OTHER PRECISION APPLICATIONS

FLANGED PRECISION BEARING CUTS PRODUCTION COSTS



Barden Precision SFR1-5K .0937 bore, .3125 O.D.

The SFR1-5 is a standard *Barden Precision* miniature bearing for low torque applications using through-bored housings.

It is particularly suited for such devices as precision gear trains and gear-head motors that also require low eccentricity and closely controlled radial play.

Its precision flange provides accurate positioning and alignment...eliminates the need for housing shoulders... reduces complexity and cost of component manufacture.

Built to the same dimensional and functional standards as the larger Barden instrument sizes, this *precision* miniature bearing has accuracy and uniformity to meet the most critical requirements, plus performance to match the needs of the application.

The SFR1-5, like the others in the full range of *Barden Precision* miniature and instrument sizes, is designed and produced to improve the performance of the mechanism in which it is fitted.

THE BARDEN CORPORATION
59 East Franklin Street, Danbury, Connecticut
Western office: 3850 Wilshire Boulevard, Los Angeles 5, Calif.

For more details circle NED-129 M8 on enclosed inquiry slip

HANDLE HEAVY LOADS

N-604-RE

WITH MULTI-PURPOSE RUGER MOBILE HYDRAULIC CRANES

Reach in-under-over . . . combine almost all lifting or moving jobs into one operation with maximum safety and adaptability.

Models available are floor . . . truck . . . convertible floor and truck . . . short mast . . . high mast . . . wide base . . . adjustable legs and retractable outrigger for side lifting.

Variable speed hydraulic controls at no extra charge. Electric models optional. Send for data today.

PRICED AS LOW AS $149.00 TM ¼

RUGER

The Crane with 1000 Uses . . . Capacities ¼ to 3 Ton

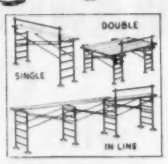
RUGER EQUIPMENT INC.
619 West Fourth Street • Uhrichsville, Ohio

For more details circle NED-130 M8 on enclosed inquiry slip

SAFE . . . at any height!

BIL-JAX
All Purpose
SCAFFOLDS
ROLLING OR STATIONARY

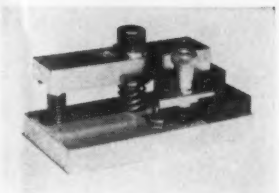
Makes any kind of "off-the-floor" repairing, painting and upkeep safer and easier. Rental and sales outlets in principal cities. Write for literature.



GETS YOU UP IN THE WORLD
BIL-JAX INC. Archbold, Ohio

For more details circle NED-131 M8 on enclosed inquiry slip

TOOL CLAMPS for jig and milling fixtures

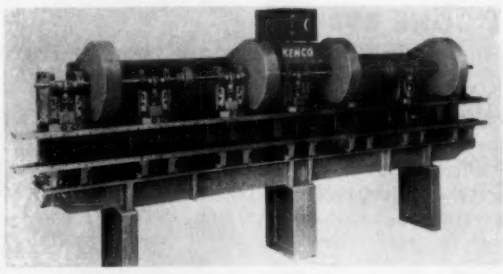


A complete line of stainless steel hardened and heat-treated tool clamps is now available from stock. These clamps are designed for a wide variety of jig and milling fixtures. They are offered in sliding swivel, flat sliding, and swinging taper nose styles. Made by **PIC Design Corp.**, 477 Atlantic Ave., East Rockaway, L. I., N. Y.

For more details circle NED-133 M8 on enclosed inquiry slip

MULTIPLE PUNCH PRESS combines seven machines into one

Consisting of seven 5-ton punch presses mounted on a common rigid platen, the Mark VII will perform a wide range of punching, forming, blanking, or bending operations on long extruded metal or other strips. Because rams are synchronized, long die plates can be used. Design distributes power through the length of the machine, and eliminates twist of the crankshaft. Plates can be arranged for any number of dies or positions within its area. The Electro-Safe motor, controls, and drive assure safety. Safe controls can be installed in any sequence for any number of operators. Continuous, single trip, foot control, or inching operation can be selected as needed. Made by **Kenco Mfg. Co.**, 5211 Telegraph Rd., Los Angeles 22, Calif.



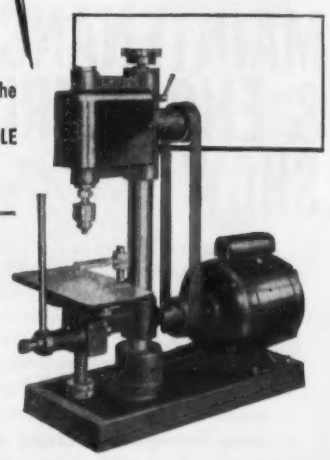
For more details circle NED-134 M8 on enclosed inquiry slip

NUT & LOCK WASHER combination is preassembled

Spring-Nut semifinished, preassembled nuts and helical spring lock washers, are available at relatively low cost. Produced by automated equipment, the combination nut and lock washer is offered in steel, brass, aluminum, and stainless steel in all commercial sizes. Made by **Jacobson Nut Mfg. Corp.**, Box 177, Kenilworth, N. J.

For more details circle NED-135 M8 on enclosed inquiry slip

Now YOU CAN TAP PRECISION HOLES IN BRITTLE MATERIALS OR THIN SHEETS



Recent design change of the HAMILTON SUPER SENSITIVE, SMALL-HOLE PRECISION TAPPING MACHINE

Also extends capacity to:—
.034" x 120 minimum
¼" x 24 maximum

YOU will want full information about this important development!

WE WILL FURNISH IT FREE

Ask for BULLETIN NO. 2464

ADDRESS
THE HAMILTON TOOL COMPANY
901 Hanover Street
HAMILTON, OHIO

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

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For more details circle NED-136 M8 on enclosed inquiry slip

of our hundreds of STANDARD WEBBINGS can cut the cost of *Your Product*

No matter what you make, in which webbing plays a part, we'll bet that one of our STANDARD webbings can save you money! We have hundreds of sizes, widths, weights, solid colors and patterns made from cotton, nylon, dacron, dynel, jute and combed peeler mercerized as well as high tensile webbings. All these items are sold from our STANDARD list while most manufacturers consider 80% of them *"Specials"* and price them accordingly. We are America's OLDEST producer of webbings. Let us show you NOW, how we can save you money all year, every year.

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Tell us how much webbing you use annually and if possible send sample for us to match.

BUFFALO WEAVING AND BELTING CO., INC.
210 CHANDLER STREET BUFFALO 7, N. Y.

We also manufacture a complete line of WOVEN COTTON CONVEYOR BELTS and PURE SHEET RUBBER.

For more details circle NED-137 M8 on enclosed inquiry slip

HIGH TEMPERATURE CAPACITORS BY BENDIX

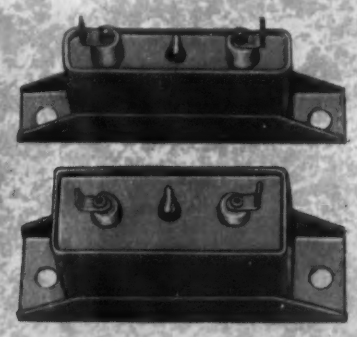
The *E*-315 capacitor offers proven stability of operation over the temperature range of −55° to +315° Centigrade* with no voltage derating and low capacitance variation. Of rugged hermetically sealed construction and nonstrategic materials, this capacitor is built for high altitude and severe environmental operation.

This nonpolarized capacitor is available in a variety of sizes in a capacity range of from 0.05 to 4.0 microfarads at 600 VDC. It is also available in higher voltage ratings. Performance data and operating characteristics are given in Technical Bulletin SL-61 which is supplied upon request.

*Confirmed by qualification test of 1000 hours at 100% rated voltage over ambient temperature range of −55° to +315° C.

Now Available in Production Quantity

E-315



DESIGN FEATURES

Temperature Range . . . −55° to +315°C. Capacitance . . . 0.05 to 4.0 uf at 600 VDC. Voltage Range . . . 600 V to 3000 V per section. No Voltage Derating, Low Capacitance and Power Factor Variation, Environmental Resistant, Hermetically Sealed, Rugged Construction, Nonstrategic Materials, Minimum Size and Weight, High Altitude Operation.

Canadian Affiliate: Aviation Electric Ltd., 200 Laurentien Blvd., Montreal 9, Quebec.
Export Sales and Service: Bendix International Division, 205 East 42nd St., New York 17, N.Y.

Scintilla Division
Sidney, New York
Bendix AVIATION CORPORATION

For more details circle NED-132 M8 on enclosed inquiry slip

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JANUARY 26-29, 1959

Your top investment in plant efficiency! More than 350 leading manufacturers will show machines, equipment, and services to cut costs, improve plant operations. You'll hear and talk with outstanding experts, get hundreds of dollar-saving ideas — in four profit-packed, on-the-job days.

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For more details circle NED-143 M8 on enclosed inquiry slip

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carries a complete stock of

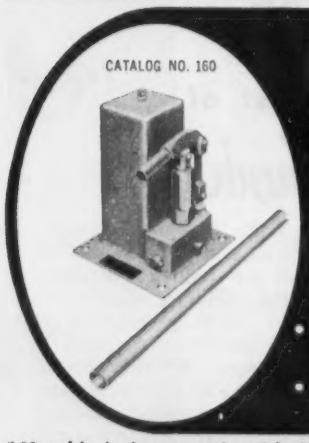
GAUGE GLASS and CYLINDERS

Need Gauge Glass or Cylinders in a hurry? Then write, wire or phone Swift for immediate delivery.

We have a complete stock of Pyrex Tubular Gauge Glass and Cylinders on hand for chemical, pharmaceutical or industrial applications. Supplied in any length or finish from 2 mm. O.D. to 7" O.D.

SWIFT *Glass Division*
SWIFT LUBRICATOR COMPANY, INC.
5 Glass St., Elmira, N.Y.

For more details circle NED-144 M8 on enclosed inquiry slip



Hand Hydraulic Pumps

- Single and Double Designs to 20,000 psi
- With or Without Reservoir

160 cubic inch reservoir with 8"x 8" base plate and 18" long handle.

Available with optional size pistons ⅜", ½", ¾", 1" and 1½".

We specialize in the manufacture of hand pump units which operate in temperatures from −65° F. to +160° F. and with any capacity reservoirs required. Pumps can be furnished on special order with custom seals to handle various aircraft types of fuels such as Pydraul, Skydrol, Oronite, etc.

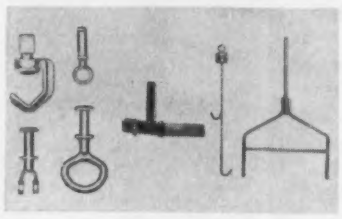
The single pump with ½", ¾", 1" or 1½" piston is now available in stainless steel.

for additional information write:

WILLIAM S. PINE
hydraulic hand pumps for 1001 uses
1635 East 22nd St., Los Angeles 11, Calif.

For more details circle NED-145 M8 on enclosed inquiry slip

CARRIERS & ATTACHMENTS for overhead trolley conveyors



Enlarged line of engineered attachments and carriers for A-F overhead trolley conveying systems makes it possible to handle special loads which cannot be hung directly from the clevis attachment of the trolley. Carriers facilitate loading and unloading, give added protection against breakage, and often enable each trolley to carry larger unit loads. Included in the line are standard and offset tray carriers, multiple hook carriers, cylindrical parts carriers, and other modifications of hooks, tongs, racks, and baskets. Made by **Alvey-Ferguson Co.**, 2565 Disney St., Cincinnati 9, Ohio.

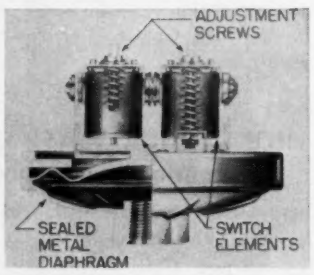
For more details circle NED-146 M8 on enclosed inquiry slip

SILICONE RUBBER sets in 30 min at room temperature

Easy-to-apply liquid Silastic RTV 502 vulcanizes to a rubber in only 30 min at room temperature. The silicone rubber retains its flexibility from −70 to 500° F, has good electrical insulating properties and, like regular heat-cured silicone rubber, resists weathering, moisture, ozone, and corona. Silastic RTV 502 is suited for sealing caulking metal-to-metal and metal-to-rubber joints, potting and encapsulating electrical and electronic parts, as a mold or impression material for making prototype parts, and as a shock and vibration absorber for delicate components. Made by **Dow Corning Corp.**, Box 592, Midland, Mich.

For more details circle NED-147 M3 on enclosed inquiry slip

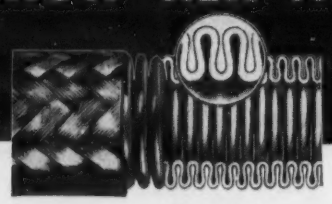
SKELETON PRESSURE SWITCH for O.E.M. and industrial use



This stripped Model 404 pressure and vacuum switch is designed specifically for use by original equipment manufacturers and for industrial applications where controls are enclosed in a common cabinet. Insensitive to vibration and mild shock, it can be mounted directly on moving and vibrating machinery. It is recommended for liquid or gas systems and is available in proof pressures from 30 in. Hg vacuum to 150 psi. Control accurately senses any two pressures over an adjustable range and actuates two independent electric circuits at predetermined increasing or decreasing pressures. The UL-listed single-pole double-throw switch elements reset automatically by snap action. Made by **Barksdale Valves**, 5125 Alcoa Ave., Los Angeles 58, Calif.

For more details circle NED-148 M8 on enclosed inquiry slip

Everyday . . .
BETTER CONNECTIONS
are made with
FLEXON® REX-WELD



Why Flexon Rex-Weld? Because it offers you what you want—convenience, dependability and long life. Rex-Weld corrugated metal hose is available in stainless steel, steel, bronze and alloys. Sizes range from 3/16" through 24", I.D.—for burst pressures to 18,000 psi. For flex connections that assure economical service—your best bet is Rex-Weld. Write today for new Catalog 161.

RW-33

FLEXONICS CORPORATION
Formerly Chicago Metal Hose Corporation
1343 S. Third Avenue, Maywood, Illinois
Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-149 M8 on enclosed inquiry slip

ROCKWOOD'S *All-Purpose* **FOAM** puts out chemical fires!

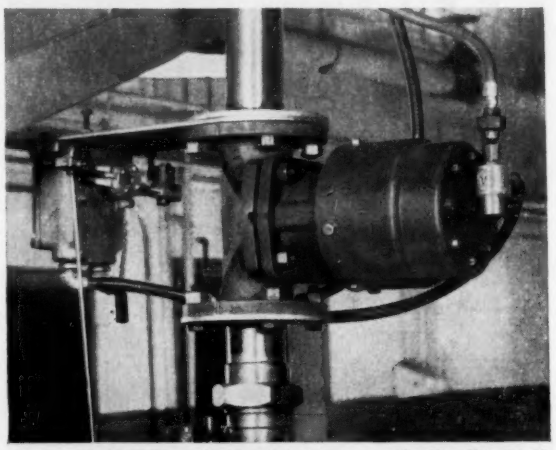
That's the amazing Rockwood All-Purpose FOAM story in a sentence, and here's what it means to you —

Alcohol, ether, esters or ketone fires can be controlled with one extinguishing agent — Rockwood All-Purpose FOAM. This new FOAM combats fires of flammable liquids which cannot generally be extinguished with foams used for hydrocarbons or water-insoluble liquids!

Rockwood All-Purpose FOAM is tested and listed by Underwriters' Laboratories Inc., is used with FOAM nozzles and with all types of water — even sea water! Available in 5 gallon cans or 50 gallon drums. Distributors in all principal cities. Write for informative booklet. ROCKWOOD SPRINKLER COMPANY, Portable Fire Protection Division, 1366 Harlow St., Worcester 5, Massachusetts.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to Cut Fire Losses

For more details circle NED-150 M8 on enclosed inquiry slip



MANPOWER COSTS CUT 50%...

with power-operated GRINNELL-SAUNDERS DIAPHRAGM VALVES

A *single* stainless steel Grinnell-Saunders Valve, with neoprene diaphragm, made this profitable difference at a leading West Coast processing company. Automated by Bendix-Westinghouse topworks, the valve completes one full cycle every 5 seconds, 8 hours a day, 5 days a week — at 190°F.

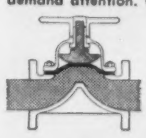
Grinnell-Saunders Diaphragm Valves may be easily equipped for automatic operation — by combining any one of a number of power operators, a sliding stem bonnet assembly, and valve body.

The operating principle of the valve is simple. The resilient, flexible diaphragm lifts high when the compressor is raised — seals tight against the body weir when compressor is lowered. Closure is positive, even should grit, pipe scale or other solid matter be trapped on the weir.

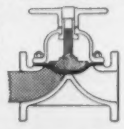
Grinnell-Saunders Diaphragm Valves are unsurpassed for handling materials as diversified as corrosive fluids, gases, beverages, foods . . . in lines where corrosion, abrasion, contamination, clogging, leakage and maintenance are costly factors.

Grinnell valves are available with body, lining and diaphragm materials to meet different service conditions. Maintenance is simple. Diaphragm can be replaced easily without removing valve. Write for details.

OPEN—No packing glands to demand attention. Operating mechanism isolated from fluid . . . sticking, clogging, contamination, corrosion eliminated.



CLOSED—Compressor or finger plate supports the diaphragm in all positions. No metal-to-metal seats to become damaged or wire-drawn.



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WHENEVER PIPING IS INVOLVED
Executive Offices: Providence, R. I. Sales Offices and Warehouses in Principal Cities

For more details circle NED-151 M8 on enclosed inquiry slip

just ONE DUSTKOP STOPS DUST
heavy duty unit services up to 19 MACHINES

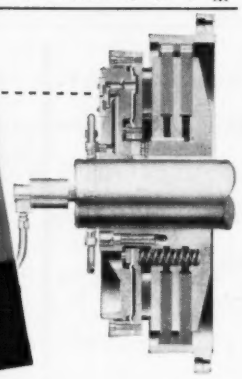
In the complete line of Aget Dust Collectors there are sizes that will service from one to nineteen machines—large or small. Some exhaust cleaned air externally . . . others clean and recirculate air within your plant. Write for illustrated folder . . . today.

46 Standard Models—Ready to Use

AGET manufacturing company
1396 Church Street • Adrian, Michigan

For more details circle NED-152 M8 on enclosed inquiry slip

NEW DODGE AIR-GRIP CLUTCH



—Amazing Sensitivity!

Less air is used to operate the Dodge Air-Grip. The result is a new sensitivity that enables the operator to "inch" the clutch, or to throw it into full engagement, as required. Quick release valves are built into the clutch itself as optional equipment. Air-Grip's unique design places the air seal disc at the end *farthest* from the pressure plates, which generate the heat. This, with automatic internal ventilation, insures cooler operation, longer life. WRITE for Bulletin.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE of Mishawaka, Ind.

For more details circle NED-153 M8 on enclosed inquiry slip

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JIG AND FIXTURE COMPONENTS
LATCH BOLTS
CAST IRON HAND KNOBS
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JIG FEET (3 TYPES)
SPHERICAL WASHERS
FIXTURE KEYS
KNURLED HEAD SCREWS
TOGGLE SHOE CLAMPS & V-PADS

HOLD DOWN AND CLAMPING TOOLS
T-NUT & STUD SETS
STEP BLOCK & CLAMP SETS
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CUT THREAD STUDS
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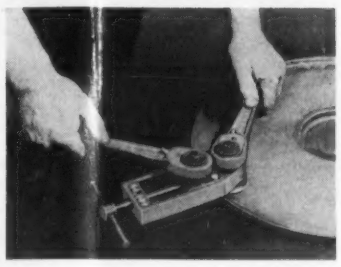
COUPLING NUTS
ADJUSTABLE STEP BLOCKS
STRAP CLAMPS (PLAIN & STEP TYPE)

CATALOG INCLUDES TRACING TEMPLATES

Northwestern
127 HOLLIER AVE., DAYTON 3, OHIO

For more details circle NED-154 M8 on enclosed inquiry slip

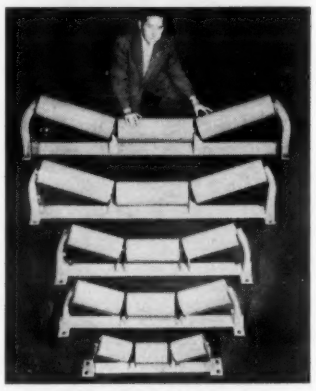
STEEL DRUM OPENER
for 18 to 22-gage steel drums



Heads of 18 to 22-gage steel shipping drums of 10 to 55-gal capacity, and from 10 to 24 in. in diameter can be cut out by Model 100 head cutter. Tool forms a safety pressed-in flange at the top of the container, without jagged edges and does not create metal particles which could contaminate drum contents. Cutting action is obtained by actuating two ratchet handles which in turn rotate the cutting wheel and knurled anvil shaft. Depth of cut is adjustable. Cutting wheel is removable for sharpening. Cutter sells for $75 and is made by **Michael A. Schinker Mfg. Co.**, 6514 S. Western Ave., Chicago 36, Ill.

For more details circle NED-155 M8 on enclosed inquiry slip

BELT CONVEYOR IDLERS
five series afford over 630 types



Offered in five series and in widths from 14 to 84 in., line of belt conveyor idlers provides more than 630 different types and sizes. The five series, designated as 5000 through 9000, make possible the exact matching of idlers to specific operating requirements of all belt conveyor installations. In addition to flat, 20-degree, and 45-degree troughed idlers, most series also include rubber cushioned idlers for use at loading point, positive action and actuating disc training idlers, and variable troughed idlers. All units have inverted angle bases and removable steel roll-retaining clips. Units are factory lubricated. Made by **Link-Belt Co.**, Dept. NED, Prudential Plaza, Chicago 1, Ill.

For more details circle NED-156 M8 on enclosed inquiry slip

STEEL HAND STAMP
for marking hardened steel

Steel mill rolls, all types of bolt headers, and various types of dies ranging in hardness up to 50 Rockwell C or 500 Brinell can be marked with the 50/500 hand stamp. It can be furnished for marking on any special contour, radii, or shape, and in any symbol, design, or trade mark insignia, as well as in all sizes of letters and figures. Made by **Quality Die Co.**, 3065 E. 93rd St., Chicago 17, Ill.

For more details circle NED-157 M8 on enclosed inquiry slip

INDUSTRIAL TRACTORS
operated as walk or ride types

Line of electric industrial tractors that can be operated either as rider or walkie types provides six different models with 12, 24, or dual 12/24-v electrical systems. Model RT tractors have traveling speeds from 3 to 6 mph, and all are equipped with the Roto-Cam control handle. For walking operation, control handle is lowered to convenient position and grip is rotated to suit walking operator. Returning the handle to vertical position, riding operator steps on platform and rotates grip to the correct speed and direction. Tractors have controlled plugging, dynamic, and deadman braking systems. Made by **Lewis-Shepard Products, Inc.**, Dept. R8-23, 125 Walnut St., Watertown 72, Mass.

For more details circle NED-158 M8 on enclosed inquiry slip

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ENGINEERED TO SOLVE ALL YOUR MARKING PROBLEMS

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★ To Permanently Mark metals, plastics, glass, wood paper, leather, ceramics.

For Complete Information Phone BAker 5-8201 or write:

PHILLIPS PROCESS CO. INC.
58 COMMERCIAL STREET
ROCHESTER 14, N. Y.

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"Feeds Itself" HOG RING FASTENER

- Exclusive automatic feed for fast operation.
- Loads quickly and easily with strip of 50 pre-formed staples.
- One-hand operation.
- Replaces tying, winding, wrapping, wiring, taping.
- Cords, ropes and cables 1/2 inch or less over-all can pass inside the open staple, which can be compressed down to 5/16 inch.
- Pointed staples provide easy penetration for fastening sisal, burlap, felt or other fabrics to wire frames.
- Ideal for tightly sealing twisted necks of cloth, paper or plastic.

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Fasten it better and faster with

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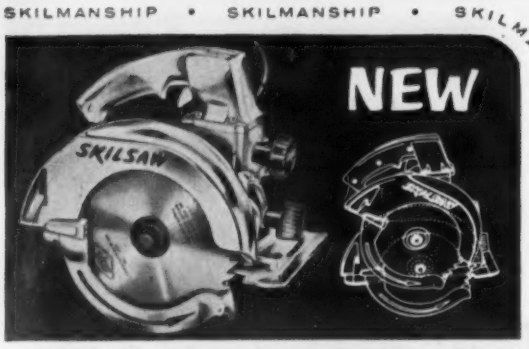
STAPLERS AND STAPLES

692 BRIGGS DRIVE, EAST GREENWICH, R. I.

For more details circle NED-160 M8 on enclosed inquiry slip

SKILMANSHIP • SKILMANSHIP • SKILMANSHIP



SKIL Top-handle Saw features *EXCLUSIVE SAFETY GUARD*

Top protection at all times. "Floating" upper guard rotates forward as cutting depth is increased. Gives maximum blade coverage on every cut. Special satin finish on handles for sure-grip. "Vari-Torque" clutch prevents kick-back. Many more features in all-new SKILSAW.

- Ultra-high 7000 rpm blade speed.
- Extra-powerful 2 HP motor.
- Superior top-handle design balances saw perfectly in-the-hand. Easy "swing-through" on end cuts.
- Exclusive blade-change lock permits easy, fast blade changes.
- All ball-bearing construction.
- Available in two sizes—7¼" Model 857 and 8¼" Model 858.

Ask your local SKIL distributor for a no-obligation Proof Test of the all-new top-handle saw with the exclusive safety features.

SKIL

Made only by SKIL Corporation, manufacturer of famous SKIL and SKILSAW products, Chicago 30, Illinois. In Canada: 3601 Dundas Street W., Toronto 9, Ontario.

For more details circle **NED-161 M8** on enclosed inquiry slip

Replaces Enclosed Drive Belts without Disassembly

MVS Belt sets a new standard in V-to-V drives because it is adjustable to any length and is installed in minutes instead of hours. Its patented design eliminates drive disassembly. MVS Belt is placed around the sheaves and coupled with T-screws. Uniform thickness and width guarantee constant power delivery at all speeds with no cross-sectional distortion. Available in 26 widths from 1½" thru 5".

- REDUCES DOWN-TIME FROM HOURS TO MINUTES
- ADJUSTABLE TO ANY LENGTH
- EXACT SPEED CONTROL
- UP TO 90% LESS VIBRATION

Write Today for Complete Information.

MVS

MANHEIM
MANUFACTURING & BELTING COMPANY
Manheim 4, Penna.

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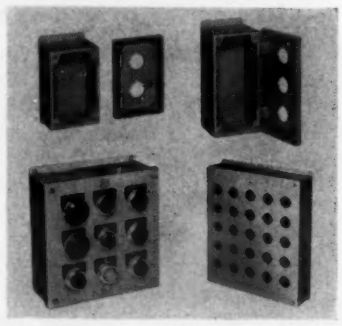
For more details circle **NED-162 M8** on enclosed inquiry slip

ELECTRIC COIN COUNTER
totalizes coin receipts

Coin receipts can be continuously totalized by PIC - 600 electric counters which are actuated by impulses from a switch or other contacting mechanism. Each counter is designed to register only one coin value. Electrical operation allows installation for easy reading and protection against tampering. Units are offered for counting pennies, nickels, dimes, quarters, and half dollars. Dollars and cents numerals are in different colors. Panelmount model measures 4 7/16 x 1⅞ x 2 13/16 in. Made by **General Controls Co.**, Production Instruments Div., 8066 McCormick Blvd., Skokie, Ill.

For more details circle **NED-163 M8** on enclosed inquiry slip

PUSHBUTTON ENCLOSURES
liquid-tight and dustproof



Ten standard sizes for 1, 2, 3, 4, 6, 9, 16, 20, and 25 control units are available in this line of oil-tight pushbutton enclosures. Liquid-tight, dustproof construction keeps out all foreign elements. Enclosures accommodate all standard makes of oil-tight pushbuttons, switches, and pilot lights, and are supplied with or without knockouts or holes. The 14-gage steel boxes have welded seam construction and removable flanged covers with a neoprene gasket. External feet are for either horizontal or vertical mounting. Made by **Keystone Mfg. Co.**, 23330 Sherwood Rd., Warren, Mich.

For more details circle **NED-164 M8** on enclosed inquiry slip

WASTE RECEPTACLE
has two self-closing doors

Economical Model 144 self-closing waste receptacle has a one-piece, all welded body with reinforced corners and an extra heavy gage steel bottom. Two independent, self-closing doors have weather-protected spring hinges. The four steel feet are finished with the same baked-on exterior enamel used on the inside and outside. Phosphate treatment of the steel before painting provides added corrosion resistance. Burlap bags with grommets permit quick removal of deposited waste. Standard green and white colors are available in the 18-in. square, 24-in. high receptacle. Made by **Bennett Mfg. Co.**, Dept. NED, Alden, N. Y.

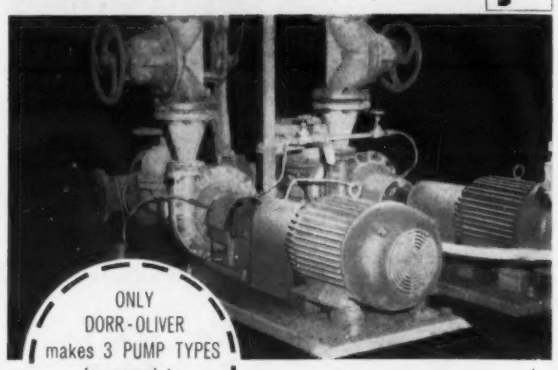
For more details circle **NED-165 M8** on enclosed inquiry slip

CUP-TYPE SAFETY GOGGLES
eight models resist severe impacts

Injection molded from tough thermoplastic, cup-type safety goggles have high impact resistance and fitting comfort. Eight models comprise the line and have a luster finish which facilitates cleaning and sterilization. Two models have removable soft sponge face pads, assuring sanitation when goggles are worn by more than one person. Four chipper-type goggles feature heat-treated Bal-Safe lenses and perforated side shields. Cup-type goggles for welders have Arc-Ban dark green glass in any of 10 different shades. Side shields guard eyes against sparks and side flashes. Made by **Bausch & Lomb Optical Co.**, 727 St. Paul St., Rochester 2, N. Y.

For more details circle **NED-166 M8** on enclosed inquiry slip

CORROSION-RESISTING
OLIVITE PUMPS pay off at gaf



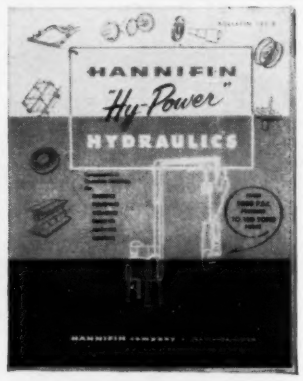
At General Aniline & Film Corporation's Linden, N. J., Dyestuff and Chemical Plant these two Hypalon-lined Olivite pumps handle a concentrated muriatic acid and caustic soda-sodium hypochlorite mixture at room temperature. Dorr-Oliver pumps give complete coverage for all chemical processing requirements. For information, write for Bulletin No. 5000.

Olivite—T.M. Reg. U.S. Pat. Off.
Hypalon—Reg. T.M. E. I. du Pont de Nemours & Co.

DORR-OLIVER INCORPORATED
WORLD-WIDE RESEARCH • ENGINEERING • EQUIPMENT
STAMFORD CONNECTICUT U.S.A.

For more details circle **NED-167 M8** on enclosed inquiry slip

Many production problems solved with Hannifin "Hy-Power" equipment...



...32-page catalog shows how

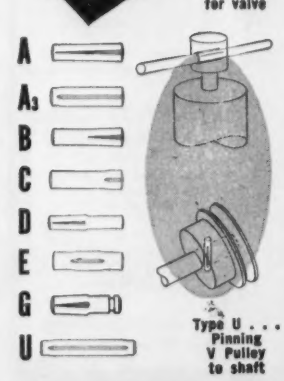
Scores of production processes are being handled more flexibly and at lower cost by Hannifin "Hy-Power" machinery and tools powered by Hannifin "Hy-Power" Pressure Generators. Processes include: punching, forming, coining, marking, staking, riveting, shearing and others. Hannifin "Hy-Power" Cylinders and Pressure Generators produce 5000 psi in minimum-space packages for a wide variety of applications. Address requests for catalog to:

HANNIFIN COMPANY
527 South Wolf Road • Des Plaines, Illinois
A DIVISION OF PARKER-HANNIFIN CORPORATION

For more details circle **NED-168 M8** on enclosed inquiry slip

***REDUCE** costs...*
***INCREASE** product quality...*
WITH
DRIV-LOK PINS

STANDARD TYPES

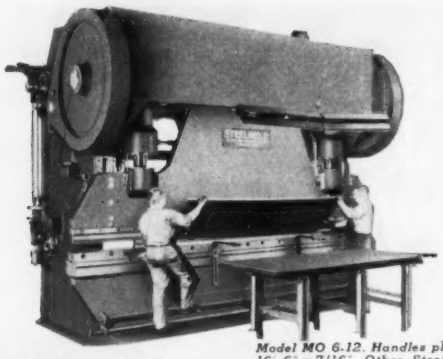


- **Fast installation . . . drill a hole and drive it in**
- **Greater holding power . . . once installed they *stay in***
- **Solid body . . . greater strength, better appearance**

DRIV-LOK Grooved Fasteners have been proven in thousands of applications . . . are saving time and labor wherever they're used. 8 standard types — many specials. Wide variety of materials. Prompt deliveries, competitive prices. Write us, giving the nature of your fastening application. We'll recommend and send samples. No obligation, of course. Write for complete Driv-Lok Catalog

DRIV-LOK SALES CORPORATION
717 Park Avenue • Sycamore, Illinois

For more details circle **NED-169 M8** on enclosed inquiry slip



Model MO 6-12. Handles plate to 16'-6" x 7/16". Other Steelwelds available for working plate to one inch and lengths to 24 feet.

REVERSING RAM SIMPLIFIES PRESS OPERATION

With a reversing ram drive you can back the ram or upper die away from the work at any point in the stroke. This speeds locating the correct ram position to achieve a specified bend or shape. It saves time and spoilage when trying new dies.

The above press has this feature, as well as many others, that simplify operation and speed production.

Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6656 East 281st St., Wickliffe, O.

STEELWELD PRESSES

▲ For more details circle **NED-170 M8** on enclosed inquiry slip ▲

Bowser remote control valves for hazardous liquids

Do these things

1. Simultaneously control flow of liquid in pipe and start or stop pump.
2. Operate one or more discharge lines from single remote power pump.
3. Provide safety factor required for insurance approval.

Bowser Figure 221 Remote Control Valve consists of a quick-acting bronze gate valve and explosion-proof mercury switch integrated for easy, in-line mounting on any pipe line. Valve and switch are actuated by weighted handle. When handle is released, flow and pump stop simultaneously.

WRITE FOR BULLETIN 221 BOWSER INC.

Regional Offices: ATLANTA, BOSTON, CHICAGO, CLEVELAND, DALLAS, KANSAS CITY, LOS ANGELES, NEW YORK

1387 E. CREIGHTON • FORT WAYNE, IND.

▲ For more details circle **NED-171 M8** on enclosed inquiry slip ▲

FOR TIMESAVING ASSEMBLY OF SMALL PARTS . . .

DIXON *Auto-Positioner*

IN FOUR STANDARD MODELS

- *New Positive-Acting Feeder*
- *Automatic Sensing Device*
- *Easy to Install — Simple to Operate*

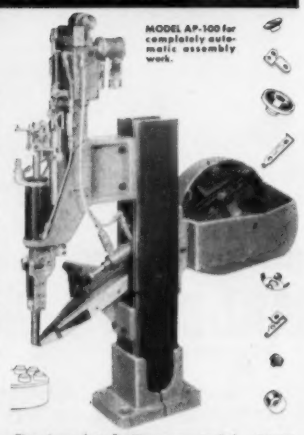
The Dixon Auto-Positioner is a compact, air-operated automatic assembly machine for parts from 1/16" to 2" size at speeds up to 6000 cycles per hour. It is furnished as a fully automatic station for use at a dial or in-line transfer table, or as a self-contained machine with pedestal and fixture table. There are four models, providing a selection of equipment to suit your requirements.

Dependable, Accurate, Compact

The new parts feeder is simple, compact (only 6 inches wide), and efficient. It provides positive advancement of the part into the chuck; it has a straight track and a positive-acting escapement; and it requires no separate motor or vibrator. Automatic sensing assures quality control. It interrupts the cycle when a part is missing or improperly assembled.

Standard Equipment, Easily Retooled

The chuck, positioning punch, and feeder tooling are easily modified or replaced for other jobs. Compactness permits close nesting at multiple stations, cutting cost of fixtures, dials, or transfer devices.



MODEL AP-100 for completely automatic assembly work.

The above Auto-Positioner was tooled to feed and place the .455" diameter formed washer into a cup (shown to the right) having .001" clearance.

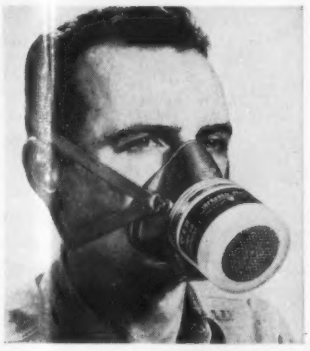
Send for Bulletin AP-B2 or request our machine planning service.

DIXON AUTOMATIC TOOL, INC.
2302-23rd AVENUE • ROCKFORD, ILLINOIS

EQUIPMENT FOR AUTOMATIC PARTS HANDLING AND ASSEMBLY

▲ For more details circle **NED-172 M8** on enclosed inquiry slip ▲

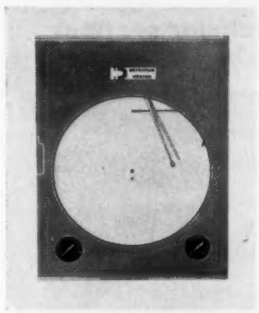
RESPIRATOR protects against excessive heat



This Thermalair respirator protects the wearer from intensely heated air, allowing emergency entrance into furnaces and boilers for repair work. It can be used with heat-reflective clothing in temperatures up to 300° F. Respirator cartridge contains a metal screen heat exchanger which absorbs heat when user inhales. Incoming air is cooled to about body temperature. As user exhales, stored hot air is forced out and cycle repeats. Respirator weighs only 6 oz, can be washed and sterilized for reuse, and has breathing resistance of only 0.2 in. of water at an air flow of 85 liters per min. Made by **American Optical Co.**, Safety Products Div., 1492 Mechanic St., Southbridge, Mass.

▲ For more details circle **NED-173 M8** on enclosed inquiry slip ▲

TEMPERATURE RECORDER-CONTROLLER in range from −100 to 100° F



Model 7815 single pen recorder, the Model 7816 two-pen two-control unit, and the Model 7817 two-pen one-control unit comprise a line of temperature recorder-controllers with 12-in. charts. Ranges as low as −100 and as high as 100° F are available as are interchangeable liquid, vapor, gas, and mercury filled tube systems. Universal controller can be used as a proportional, on-off, or a differential gap controller. For complex processes where appreciable transfer lag and/or dead time is present, a proportional controller is available with reset, or reset and derivative valves. Proportional band adjustability for this group is 2 to 300 per cent. Made by **Daystrom, Inc.**, Daystrom-Weston Industrial Div., Newark 12, N. J.

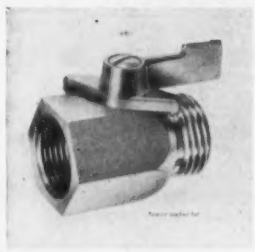
▲ For more details circle **NED-174 M8** on enclosed inquiry slip ▲

FORK LIFT TRUCK boom lifts 4000 lb to 22½ ft

Hydraulically controlled fork mast on the Hi-Lifter fork truck has a three-piece telescopic boom which allows entrance into low headroom areas, yet will lift a 4000-lb load to a height of 22½ ft on a 24-in. center. Maximum capacity is 6000 lb raised to 10 ft. The mast tilts 10 degrees forward or backward. Power steering, conveniently placed controls, four-wheel drive, and large tires permit use on rough terrain with good traction. Top speed is 18 mph. A 70-hp gasoline engine and automatic transmission with three speed ranges, forward and reverse, are incorporated. Made by **Kwik-Mix Co.**, Dept. RS, 235 W. Grand Ave., Port Washington, Wis.

▲ For more details circle **NED-175 M8** on enclosed inquiry slip ▲

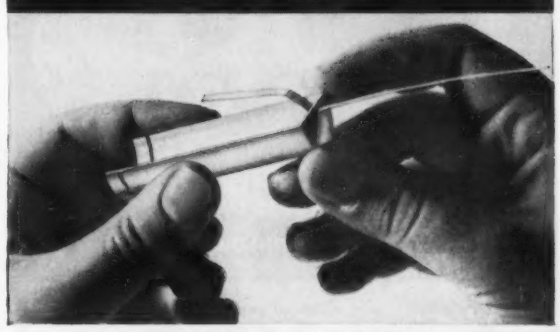
BRASS VALVE turns on or off in one-quarter turn



This ¾-in. brass valve for pipe-to-hose and pipe-to-pipe connection will turn from off to full flow in one-quarter turn. (Editor's Note: The size of this valve was erroneously stated as ¼ in. in the Aug. '58 issue.) Flow can be set for any rate desired. Quad Ring and O-ring pressure seals assure positive shutoff and eliminate leaking or dripping. Valve is made from solid brass bar. Made by **Specialty Mfg. Co.**, 2356 University Ave., St. Paul 14, Minn.

▲ For more details circle **NED-176 M8** on enclosed inquiry slip ▲

FREE ANALYSIS OF YOUR SMALL METAL PARTS JOINING PROBLEMS



WELDING TIME CUT IN HALF!

PROBLEM: join an aluminum tab to the inside, and a tinned copper lead to the outside of this aluminum capacitor can. **SOLUTION:** A **Raytheon Welding Analyst** suggested making **both welds at once;** helped select the proper welding equipment and set-up for the job. **RESULT:** welding time cut in half.

HOW YOU CAN BENEFIT—
If you have a small metal parts joining problem, see your Raytheon Welding Analyst. He will be happy to help you find a solution—without cost or obligation. Write Dept. NP12.

RAYTHEON

RAYTHEON MANUFACTURING COMPANY
Commercial Equipment Division, Industrial Products Dept., Waltham, Mass.

▲ For more details circle **NED-177 M8** on enclosed inquiry slip ▲

Fabric Dust Arrester

AMERjet is designed specifically for collecting extremely fine dust or dust that must be reclaimed dry. Its cleaning media is continuously conditioned by a reverse jet of high-pressure air. This permits velocities through the cleaning tube up to *five times higher* than ordinary fabric collectors. In addition, AMERjet offers these big plus values: (1) Occupies ½ the space of conventional collectors, (2) Reduces installation cost by 50%, (3) Lowers maintenance costs by 45%. Write for AMERjet Bulletin 279.

American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

▲ For more details circle **NED-178 M8** on enclosed inquiry slip ▲

Large and Small Dials .0001" and .0005" Grads.

SERIES L
8 MODELS
2 STYLES

LONG RANGE

Up to four times the range you'd expect in a test indicator.

HIGH MAGNIFICATION

At least twice the magnification of other type test indicators. Many other features. Write for brochure and prices.

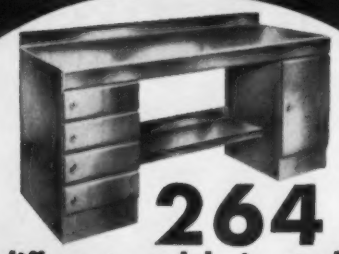
FEDERAL PRODUCTS CORPORATION
81712 Eddy Street, Providence 1, R. I.

Ask **FEDERAL** *First*

FOR RECOMMENDATIONS IN MODERN GAGES . . .

Dial Indicating, Air, Electric, or Electronic—for Inspecting, Measuring, Sorting, or Automation Gaging

▲ For more details circle **NED-179 M8** on enclosed inquiry slip ▲



264 different models in stock

Equipto modern-flow BENCHES

That's right! 264 different models of custom designed benches available to you at assembly line prices. Available with many types and styles of drawers, drawer pedestals, cabinet pedestals, sliding doors, aerial shelves and a choice of 4 different tops in various lengths.

Why not find out the whole story today. Write for big 16 page Catalog No. 204 illustrating and describing this outstanding line of top quality benches.

Equipto 690 Prairie Avenue Aurora, Illinois

Manufacturer of World's Finest Steel Shelving-Slotted Angle-Bins-Drawer Units-Lockers-Carts-Benches.

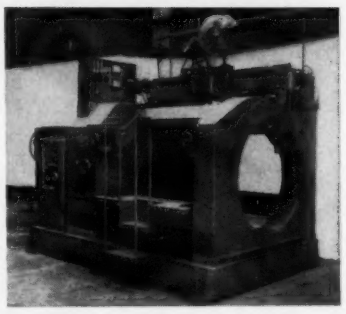
▲ For more details circle NED-180 M8 on enclosed inquiry slip ▲

LIQUID-BLASTING MACHINE produces 16-250 micro finishes

Production and precision cleaning, finishing, peening, burnishing, and deburring of metal parts can be done with the Model 15 Hydro-Hone, a liquid-blasting machine. It produces 16 to 250 micro finishes by adjusting air pressures and the size and type of abrasive media used. Air required ranges from 20 to 65 cfm at 90 psi. Its internal working area is 20 x 20 x 20 in. A counterbalanced side-entry door makes possible the processing of larger parts. It can be equipped with a Hydro-Hone tumbling barrel for automatic high production finishing of small parts. A 1/3-hp motor powered pump agitates and feeds the abrasives at 35 gpm and a 1/25-hp blower removes vapors and fog through a wire mesh filter. A foot switch controls air pressure between 0 and 160 psi. Made by **Hydro-Hone Corp.**, 7516 Pacific Blvd., Huntington Park, Calif.

▲ For more details circle NED-182 M8 on enclosed inquiry slip ▲

LONGITUDINAL SEAMER welds flat sheets, tubular sections up to 4 ft long and 1/2 in. thick



Flat sheets or tubular sections up to 4 ft in diameter and 4 ft long and from 0.005 to 1/2 in. thick can be welded by the precision longitudinal seamer. Its travel carriage rides on sealed bearings on a heat treated and ground tool steel track which is adjustable in both vertical and horizontal planes. Maximum runout in full travel length is 0.005 in.

The driving mechanism consists of a Saginaw ball-nut leadscrew and a 1/3-hp Thy-mo-trol full-wave motor which drives through a V-belt and speed reducer. Holddown clamps are mounted on adjustable slides. Mandrels for 6 and 12-in. tube have back-up bars which carry argon in a distributing manifold and have strip heaters rated at 4000 w. Back-up shoe temperature can be controlled within 2° F up to 550° F.

Location of mandrel; clamp beams, and travel carriage track is controlled by illuminated pointers and scales, read through magnifying glasses. Welding equipment mounted on the base consists of a Vickers power source with up-slope and down-slope, and a Linde wire feeder and torch assembly. Made by **Berkeley-Davis, Inc.**, 1021 Bahls St., Danville, Ill.

▲ For more details circle NED-183 M8 on enclosed inquiry slip ▲

Get this Book NOW!

KEEP YOUR WOOD BLOCK FLOORS LIKE NEW

THE JENNISON-WRIGHT CORP., TOLEDO 9, OHIO

▲ For more details circle NED-185 M8 on enclosed inquiry slip ▲

SCHRAMM PORTABLE COMPRESSORS

SCHRAMM PORTABLE COMPRESSORS

Stand-by air power

Use Schramm Portable Air Compressors for emergency, stand-by air power . . . you can tow them right to the spot . . . put your equipment back in operation. Use them, too, for maintenance jobs—inside the plant and out—or for air power in temporary locations. Can also be used to find the right air capacity on new jobs.

Uses for Schramm Portable Air Compressors are unlimited. Consider them next time you need added air capacity. Write today for details of Schramm Portable Compressors—most popular for plant operation—Catalog 5501.

Schramm, Inc.
MANUFACTURERS OF AIR COMPRESSORS
700 North Garfield Ave. • West Chester, Pa.

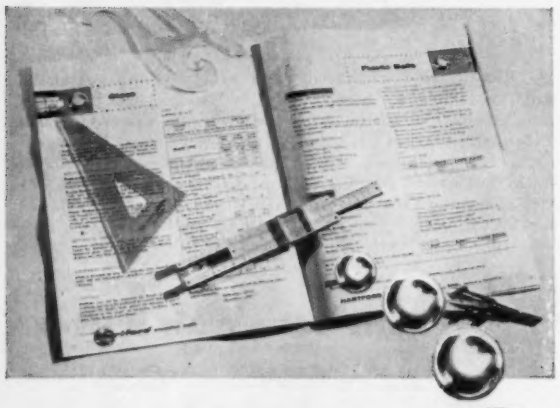
SCHRAMM PORTABLE COMPRESSORS

SCHRAMM PORTABLE COMPRESSORS

▲ For more details circle NED-186 M8 on enclosed inquiry slip ▲

Every design engineer should have this technical guide to...

Precision Balls



For the latest technical data on precision balls . . . in all grades, sizes and materials . . . from carbon steel to *Pyroceram . . . you will want this new Hartford Ball Catalog. It is the most comprehensive and easy-to-use guide on essential ball information ever published! Your copy will be sent promptly on request. Hartford welcomes your inquiry on any ball application, standard or special.

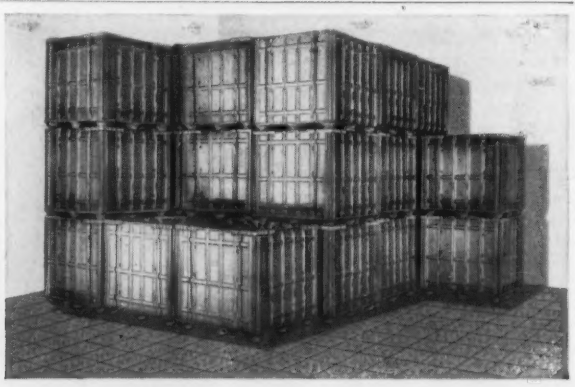
*Corning Glass Works trademark

You can be sure of your source with Hartford. Rigid quality control includes both visual and electronic inspection and gaging.

Hartford PRECISION BALLS • BEARINGS

Hartford Steel Ball Co., Inc., 82 Jefferson Ave., West Hartford 6, Conn.

▲ For more details circle NED-181 M8 on enclosed inquiry slip ▲



Capacity of storage areas like that on the left can be greatly increased with BAND-BOXES. Special palletized bottom keeps them neatly and safely stacked.

How to increase storage capacity in less space with BAND-BOX

Patent applied for

Because they're designed for safe, neat stacking, BAND-BOXES can solve almost any storage problem. With an effective capacity of approximately 4,000 lbs., each BAND-BOX can support static loads up to 16,000 lbs. to minimize the storage area required.

Even *empty* BAND-BOXES save space. They're quickly "knocked-down" and 12 nested boxes take the same cubic area as a single assembled unit.

BAND-BOXES ARE IDEAL SHIPPING CONTAINERS AS WELL! Available with either Stack Lock Corners for open shipping or full top for maximum protection, BAND-BOXES are lightweight, yet very tough reusable containers for both intra- and inter-plant shipments.

See how Ackermann BAND-BOXES can economically solve storage and shipping problems. For complete information write to the Ackermann Manufacturing Company, subsidiary of Wheeling Steel Corporation, Wheeling, West Virginia.

WHEELING STEEL

IT'S WHEELING STEEL

▲ For more details circle NED-184 M8 on enclosed inquiry slip ▲

Small Stampings

Simple or intricate shapes punched, bent, crimped from all types of metals, including spring steel. Properly heat-treated to hold tolerances and working range. Our toolmakers are skilled in designing economical production set-ups for small or large orders. Send sample or specifications for quotation.

Associated Spring Corporation
General Offices
Bristol, Connecticut

5823

For more details circle **NED-187 M8** on enclosed inquiry slip

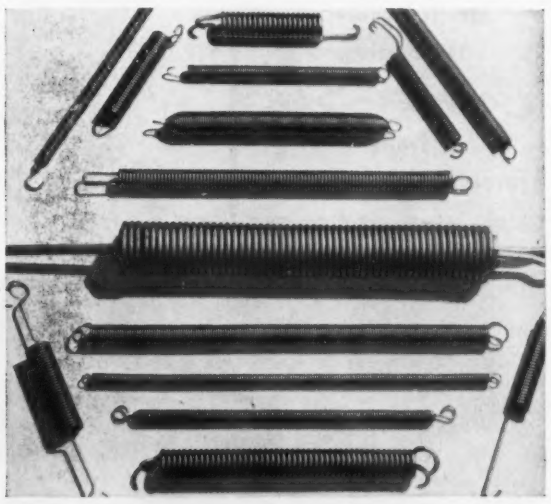
Torsion Springs

From a tiny hinge spring to a rugged auto starter spring, A.S.C. Divisions make countless varieties of torsion springs. Materials are round or flat wire wound spirally or on edge. Write for booklet "Spring Design and Selection—in brief."

Associated Spring Corporation
General Offices
Bristol, Connecticut

5822

For more details circle **NED-188 M8** on enclosed inquiry slip



Extension Springs

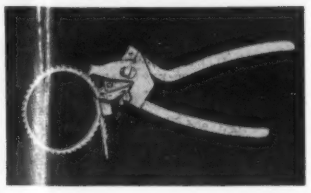
All types and sizes custom made to meet your performance requirements. Wide range of end coil treatment, hooks and loops. Also swivel end and drawbar types. Precision made to hold dimensions and load carrying capacity. Send for pamphlet "Spring Design and Selection—in brief."

Associated Spring Corporation
General Offices
Bristol, Connecticut

5821

For more details circle **NED-189 M8** on enclosed inquiry slip

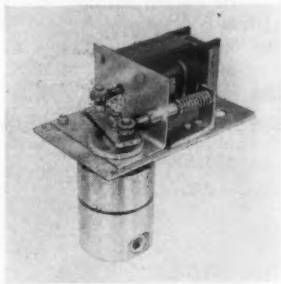
WIRE SECURING DEVICE
ties bundles with nylon straps



Wire bundles secured with Bund-L-Tite nylon straps by Bundle-Tie pliers withstand vibration and extraneous loading. The straps are self-locking and the double-detented buckles eliminate stress concentration. Bayonet hangers which provide fixed mounting with Bund-L-Tite ties are optional. Also offered are miniature and standard sizes of clamps for rigid mounting installations. Made by **Dakota Engineering, Inc.**, 4315 Sepulveda Blvd., Culver City, Calif.

For more details circle **NED-190 M8** on enclosed inquiry slip

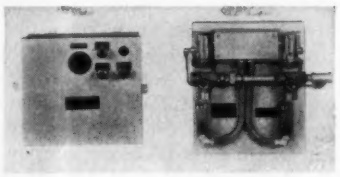
SOLENOID VALVES
have 10,000 psi liquid, gas rating



Optically flat, metal-to-metal, sealing surfaces of self-aligning sealing rings and the mating rotor face are protected in these Shear-Seal solenoid valves by constant intimate contact. Flow is through the center of the Shear-Seals, not across the sealing surfaces. The stocked valves are made in shut-off and four-way types with 1/4, 3/8, and 1/2-in. port sizes. They are rated for 10,000-psi liquid or gas and will withstand surges up to 15,000 psi without damage to sealing qualities. Confining pressure to the flow passages eliminates external shaft leakage. Made by **Barksdale Valves**, 5125 Alcoa Ave., Los Angeles 58, Calif.

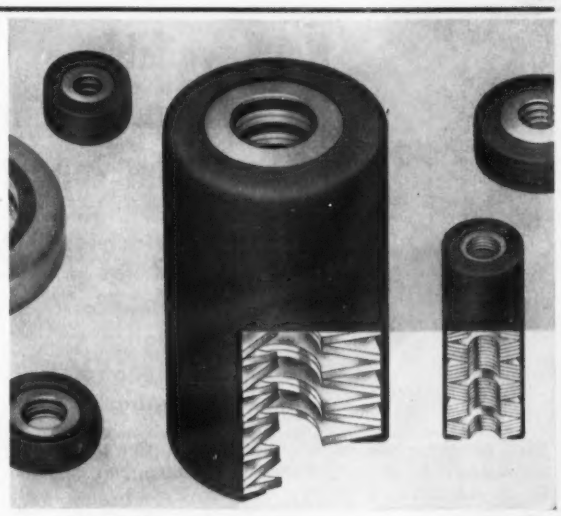
For more details circle **NED-191 M8** on enclosed inquiry slip

PRESS CONTROL SYSTEM
prevents accidental repeat cycles



Accidental repeat operation of single cycling presses, brakes, shears, and indexing units employing an air-operated friction clutch and spring-set brake is made virtually impossible by the Andrus-Coon press control. System has two separate electrical, pneumatic, and mechanical control circuits operating in tandem. These are interlocked so that failure of any one or more than one control component automatically stops the machine at once, or at the end of the cycle. Built to JIC or specified standards, the system consists of a prewired valve package, a prewired control panel assembly, plus limit and run pushbutton switches. It is built for new or existing control installations. Made by **Textrol, Inc.**, 4015 Prospect Ave., Cleveland 15, Ohio.

For more details circle **NED-192 M8** on enclosed inquiry slip



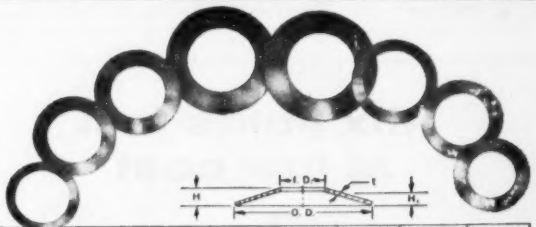
Flexi-Pak ELASTIC COVERED† Energy Cartridges

Energy Cartridges are available in Flexi-Pak form, with molded rubber, neoprene, or other elastic covering instead of rivets. For use on belleville washers with narrow walls, or where there are clearance restrictions, and to insure correct sequence of washers in handling. Write for pamphlet "Flexi-Pak elastic-covered† Energy Cartridges" (†U.S. Pat. 2,432,717).

Associated Spring Corporation
General Offices
Bristol, Connecticut

5842

For more details circle **NED-194 M8** on enclosed inquiry slip



Part No.	O.D. (max.)	I.D. (min.)	t	H (approx.)	H_1	P, ±10%	P*
.375-15	.375	.190	.015	.027	.021	35	55
.375-20	.375	.190	.020	.030	.025	60	110
500-18	.500	.255	.018	.034	.026	45	70
500-25	.500	.255	.025	.038	.031	95	160
625-22	.625	.317	.022	.042	.032	70	105
625-32	.625	.317	.032	.048	.040	145	260
750-28	.750	.380	.028	.051	.039	110	175
750-40	.750	.380	.040	.059	.049	235	415
1000-35	1.000	.505	.035	.067	.051	175	260
1000-50	1.000	.505	.050	.075	.062	340	600
1250-40	1.250	.630	.040	.082	.061	230	330
1250-62	1.250	.630	.062	.092	.077	475	870
1500-45	1.500	.755	.045	.093	.069	284	400
1500-72	1.500	.755	.072	.107	.089	665	1180

*P Calculated Load at Flat Position

Stock Sizes of Belleville Washers

The sizes listed above are designed primarily for high loads in limited space. Residual stresses are introduced during manufacture; washers can be compressed to flat position and released without loss of free cone height. Good fatigue life may be expected between slight preload and "H_1". Send for stock washer pamphlet giving complete information.

Associated Spring Corporation
General Offices
Bristol, Connecticut

5841

For more details circle **NED-195 M8** on enclosed inquiry slip

Engineering, manufacturing, and sales facilities located coast-to-coast for custom service on all your requirements

BRISTOL, Conn.
Wallace Barnes Division
Dunbar Brothers Division
F. N. Manross and Sons Division

SYRACUSE 9, N. Y.
Wallace Barnes Division
State Fair Boulevard

CORRY, Pa.
Raymond Manufacturing Division

HAMILTON, Ontario, Canada
The Wallace Barnes Company Ltd.
274 Sherman Ave. North

MONTREAL, Quebec, Canada
The Wallace Barnes Company Ltd.
Nordic Ave. at Hymus Blvd.
Pointe Claire

CLEVELAND 23, Ohio
Sales Office
22700 Shore Center Avenue

DAYTON 3, Ohio
Ohio Division
1825 East First Street

PLYMOUTH, Mich.
B-G-R Division
40300 Plymouth Road

ANN ARBOR, Mich.
B-G-R Division
401 East Stadium Boulevard

CHICAGO 14, Ill.
Gibson Division
1800 Clybourn Ave.

MILWAUKEE, Wis.
Milwaukee Division
341 East Erie Street

LOS ANGELES, Calif.
Seaboard Pacific Division
15001 South Broadway
Gardena, Calif.

SAN FRANCISCO, Calif.
Sales Office
19031 Saratoga Glen Place
Saratoga, Calif.

Wallace Barnes Steel Division
Bristol, Conn.
High Carbon Strip Steel

Associated Spring Corporation
General Offices
Bristol, Connecticut

For more details circle **NED-193 M8** on enclosed inquiry slip

Now available— SEL-LOK spring pins in beryllium copper

- Superior electrical properties
- Excellent corrosion resistance
- Fast, economical fastening

SEL-LOK spring pins made of beryllium copper give you the speed and economy of self-locking fastening, plus outstanding electrical characteristics. They have high conductivity, are nonsparking and nonmagnetic. In addition, they offer superior corrosion resistance. These properties are combined in a material having 60% the strength of carbon steel, more than ample for most applications. Sold by your authorized SPS distributor in sizes from 1/16 x 3/16 to ¼ x 3½ in. Write for Catalog Sheet 2376. (SEL-LOK spring pins also available in carbon or corrosion-resistant steel, sizes from 1/16 x 3/16 to ½ x 5 in. Request Bulletin 2331.) STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

SPS Jenkintown • Pennsylvania

Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co. • National Machine Products Co. • Nutt-Shel Co. • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

▲ For more details circle NED-197 M8 on enclosed inquiry slip ▲

Mix fluids fast at low cost

Get a uniform product—often in seconds by flipping a switch

Put new zip into your production! Power-mix fluids in any open tank or container—with LIGHTNIN Portable Mixers.

Flip a switch, and powerful LIGHTNIN propeller stream goes to work—*tumbles* as it *rotates* the batch for complete uniformity, often in a few seconds.

Suspend heavy solids . . . mix, blend, or stir liquids . . . make up solutions . . . disperse gases, wash, circulate, control batch temperatures. Your mixing results are *unconditionally guaranteed* when you mix with LIGHTNINS. Thousands in use; many 25 years and more.

Mixer locks instantly at any position. True-running shaft is quickly removable; cannot loosen or jam in service. Widest choice of ball-bearing motors. For full details, request 28-page illustrated Catalog B-108.

Mixers for permanent mounting, too Full selection of LIGHTNINS for tanks to 6 million gallons. Sizes ¼ to 500 HP. For details, request illustrated Catalog B-109.

30 PORTABLE MODELS, direct or gear drive, electric or air driven. Sizes ⅛ to 3 HP.

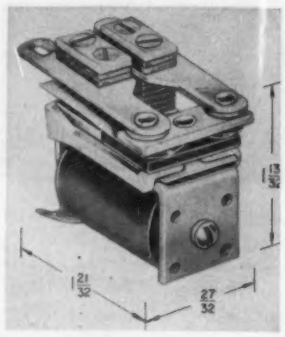
Lightnin® Mixers

MIXCO fluid mixing specialists

MIXING EQUIPMENT Co., Inc., 165-n Mt. Read Blvd., Rochester 3, N. Y.
In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 19, Ont.

▲ For more details circle NED-198 M8 on enclosed inquiry slip ▲

MINIATURE CONTACTOR switches loads up to 60 amp



Furnished with single-pole single-throw double-break contacts, either normally-open or normally-closed, the Type MB miniature contactor can be operated under shock of 30 g and vibrations of 10 g to 500 cycles. It is capable of switching loads up to 60 amp with control signals as small as 2.7 w. In addition to normal load of 60 amp at 30 v dc, it can handle starting surges up to 150 amp for 300 milliseconds. A double-throw version of this relay can also be furnished with contacts derated to 20 amp. Respective open and hermetically sealed have weights of 2 and 4 oz. Made by **Potter & Brumfield, Inc.**, 270 N. Main St., Princeton, Ind.

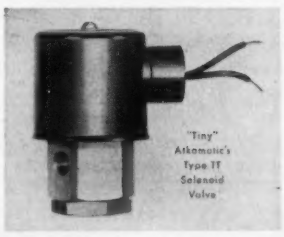
▲ For more details circle NED-199 M8 on enclosed inquiry slip ▲

CONDUCTOR SYSTEM for mobile equipment electrification

Designed to meet heavy duty, straight-run requirements such as steel mill cranes and shipyard gantries, the 1000 - amp Hevi-Bar conductor system is engineered on the job by plant mechanics. It can be installed as an open (bare conductor) system or as an enclosed (safety) system. Three components of the system are aluminum conductor bars, sliding shoe trolley collectors, and hanger clamps. In the safety type system the conductor bars are enclosed in plastic covers. Contact surfaces of the aluminum conductors are heavily clad with a hard, high melting point material for protection against oxidation and arcing. Bars, available in 10 and 20-ft lengths, are welded together by the exothermic Cadweld process which requires no outside source of power or heat. Made by **Insul-8-Corp.** Dept. N, 1369 Industrial Rd., San Carlos, Calif.

▲ For more details circle NED-200 M8 on enclosed inquiry slip ▲

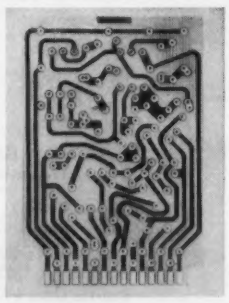
SOLENOID VALVE direct lift type rated 0-400 psi



Main valve ports open instantly when the solenoid of the direct lift Type TT Tiny valve is energized. The single-seated, angle type valve is machined from brass bar stock and has a stainless steel plunger and point assembly. Only 3¼ in. high, it is suited to applications where a wide range of pressures is coupled with relatively small flow of air, gases, water, oil, or steam. Pressure range is 0 to 400 psi, with no pressure required to open the valve. Pipe sizes are ⅛ and ¼ in. Made by **Atkomatic Valve Co.**, 545 W. Abbott St., Indianapolis 25, Ind.

▲ For more details circle NED-201 M8 on enclosed inquiry slip ▲

INSULATED PRINTED CIRCUITS conductor imbedded in base plastic



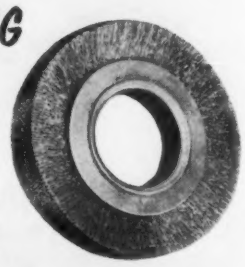
High reliability and easy production handling are advantages afforded by Imbedded Circuitry, a printed circuit construction in which the conductor is imbedded in the base material and protected by an insulating cover. Conductor is three to six times the thickness of surface-type printed circuitry and has a slight taper to lock it in place. Only terminals and contact areas are exposed to the surface. Imbedded Circuitry has high surface resistivity, dielectric strength, and physical rigidity. Extra thick conductors can be made narrower and can thus be placed closer together for miniaturization. Process developed by **Beck's, Inc.**, 300 E. Fifth St., St. Paul 1, Minn.

▲ For more details circle NED-202 M8 on enclosed inquiry slip ▲

A FREE COST-CUTTING CONSULTANT

Your local Industrial Distributor has gained wide experience in serving many industries and in providing solutions to a wide variety of production problems. His service begins with an idea—a cost-cutting idea in the form of a product or method which he is willing to suggest at no charge to you.

A COST-CUTTING TOOL



He frequently recommends Anderson wire brushes for those jobs requiring production efficiency with top quality results.

For lowest cost per unit processed select: Anderson.

Write for complete catalog of wire brushes with detailed selection and operation data.

Anderson CORPORATION

1048 Southbridge St., Worcester 10, Mass.

▲ For more details circle NED-203 M8 on enclosed inquiry slip ▲

NEW silver brazing REFERENCE BOOK

Contains:
- Information on NO-TANGLE — NOTCH COIL RINGS.
- Preform Selection . . . Simple Ordering Information.
- Charts for Quick Accurate Alloy Calculation.
- Types of Flux and Application.
- Edgewound, Blanked Washers, Preforms, Silver Brazing Alloys and Solders Available.

Send for FREE Copy Today!

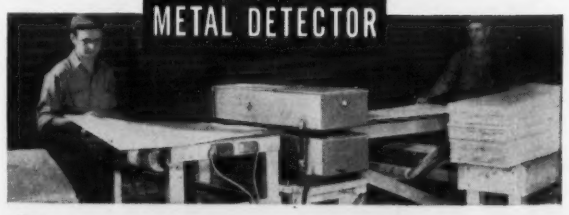
LUCAS MILHAUPT Engineering COMPANY

5070 South Lake Drive, Cudahy, Wis.

▲ For more details circle NED-204 M8 on enclosed inquiry slip ▲

Mr. Hi Frequency, the Electronic "Counter-Spy" Traps Foreign Metal Agents

ALLIS-CHALMERS METAL DETECTOR



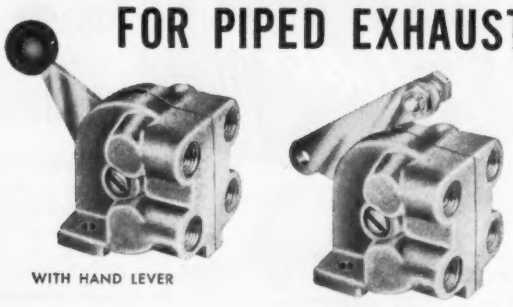
This electronic counter-spy assures positive protection against sabotage of quality by stray metal particles in your process or production line. Magnetic or non-magnetic metal particles, no matter how deeply embedded, immediately trigger a warning or reject mechanism when they pass the compact Allis-Chalmers metal detector.

This device is economical to operate, permits conveyor speeds to 600 fpm, and is easily incorporated into any production setup. Ask your local A-C man for Bulletin 15B7217B, or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS A-5629

▲ For more details circle NED-205 M8 on enclosed inquiry slip ▲

NEW SLIDING SEAL AIR CONTROL VALVES FOR PIPED EXHAUST



WITH HAND LEVER

WITH MECHANICAL LEVER

. . . Complete series
. . . 2, 3 and 4-way types with ¼" N.P.T. ports

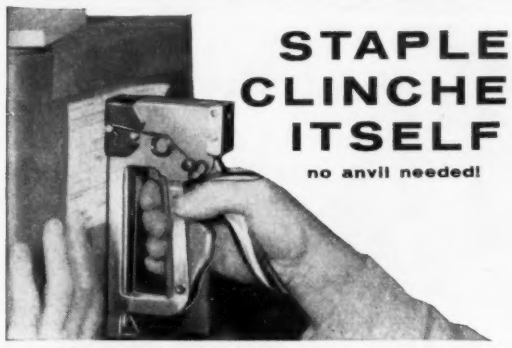
Valve bodies house precision-lapped stainless steel disc which slides on a bronze ring to provide positive airtight sealing action. Ideal for neatest installations to control small single or double-acting cylinders. Special threaded port permits piping exhaust to desired position. Versatile, compact, durable. Minimum working parts, easily replaceable. Flow capacity: 55 cu. ft. per minute.

Fully informative literature available. Direct all your questions on air control to Schrader.

Schrader®

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Inc.
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

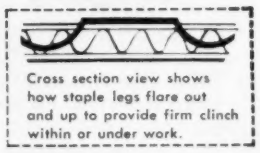
▲ For more details circle **NED-206 M8** on enclosed inquiry slip ▲



STAPLE CLINCHES ITSELF

no anvil needed!

DUO-FAST OUTWARD-CLINCH STAPLER



Cross section view shows how staple legs flare out and up to provide firm clinch within or under work.

A real problem solver on jobs where conventional stapler cannot be used . . . such as attaching tags to filled cartons, fastening insulation around air ducts, etc.

Special mechanism diverts staple legs outward and upward in a clinching action as shown. No anvil is needed. Easy, one-hand operation — just compress the handle and the job is done.

Free Service. Another quality tool in DUO-FAST's 150-model line, the Outward-Clinch Stapler above carries our famous Free Service Guarantee.

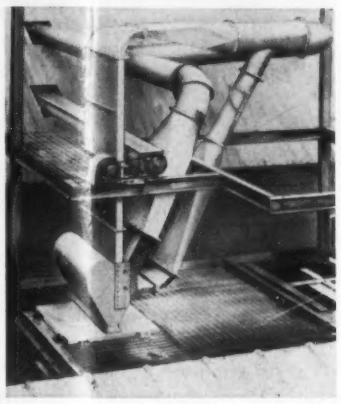
Send today for FREE Bulletin FT-8 on DUO-FAST Outward-Clinch Staplers.

8519

DUO-FAST / FASTENER CORPORATION
3758-60 River Road • Franklin Park, Ill.

▲ For more details circle **NED-207 M8** on enclosed inquiry slip ▲

POWDER MATERIAL CLASSIFIER
gravitational-inertial types handle 100 lb to 100 tons per hr



Sizes to handle from 100 lb to 100 tons of material per hour are available in this Gravitational - Inertial classifier which correctly classifies better than 95 per cent of the feed material. For applications in the 200 to 50-mesh range, it classifies ores, mineral flours, milled products, metal powders, fillers, fibers, chemicals, food powders, resin powders, sintered metals, salts and crystals, pulverized coal, and cosmetics.

Air or gas entrained feed material enters classifier through top inlet and cascades downward past inclined vanes through which air and entrained fines are drawn off. By controlling inlet air velocities and vane exhaust air, gravitational, inertial, centrifugal, and drag forces cause particles below a given size to be drawn off through the vanes. Those above this size continue downward.

Secondary air supply introduced below the vanes crosses the stream of coarse particles and scrubs away any adhered fines. A 30-ton-per-hr unit requires no more space than an office desk. Made by **Buell Engineering Co.**, 123 William St., New York, N. Y.

▲ For more details circle **NED-209 M8** on enclosed inquiry slip ▲

COLD-HEADING MACHINE
designed for miniature parts

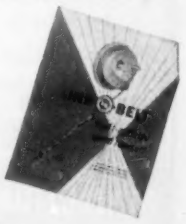
Electrical contacts, rivets, pins, and similar parts as small as 0.012 in. in diameter by 0.016 in. long can be produced on the Omega 00 cold-heading machine. The solid die, double-stroke machine will cut to length, head, and form from 80 and 120 pieces per minute to close tolerances. Maximum wire diameter accommodated is 0.070 in. with most alloys and up to 0.120 in. with soft aluminum. Part lengths may range from 0.016 to 0.400 in. Hollowing and heading of rivets can be performed in one operation. One set of dies is supplied to make one specific part of the customer's choice. Coil reel, straightening rolls, feed rolls, built-in V-belt motor drive, and guards are standard. Drawers in the cabinet base receive completed parts. Made by **Robert E Morris Co.**, 5004 Farmington Avenue, West Hartford, Conn.

▲ For more details circle **NED-210 M8** on enclosed inquiry slip ▲

NEW!

LINK-BELT SHAFT-MOUNTED SPEED REDUCERS

The ultimate in ease
• of purchasing,
• of mounting,
• of maintenance



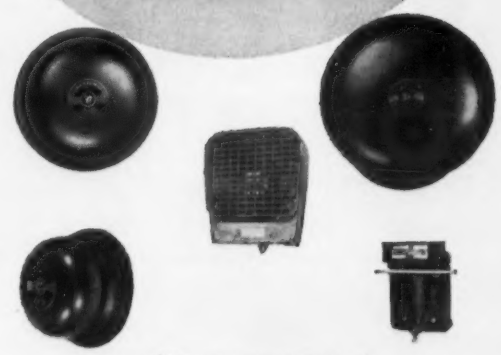
New, versatile Link-Belt shaft-mounted speed reducers simplify and satisfy the majority of speed reduction jobs. Special features include: easy installation, fast belt tensioning, live-action lubrication, wide application flexibility, simplified selection, off-the-shelf availability. For complete facts, send for Book 2618. Address Link-Belt Company, Prudential Plaza, Chicago 1, Ill. 14,949

▲ For more details circle **NED-211 M8** on enclosed inquiry slip ▲

bells . . . horns
chimes
cow gongs

Wheelock SIGNALS

complete line of quality audible signals



gives you one source of supply for any signal

Vibrating bells, ranging from 2½ inches to 20 inches, incorporate Wheelock Signals' original Underdome type operation. Such advanced designs and styles are represented in our entire line of audible signals: explosion proof bells, musical and soft tone signals, chimes, cow gongs, tapsounders and buzzers, horns and whistles.

Wheelock Signals' new brochure just issued, shows complete photos, descriptions, diagrams and specifications of these audible signals. For your copy, write on your letterhead . . . ask for Bulletin No. 5C.

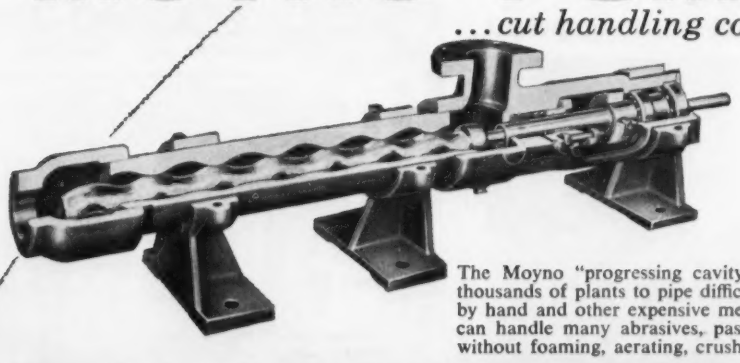
Wheelock SIGNALS INC
LONG BRANCH, N. J.

▲ For more details circle **NED-212 M8** on enclosed inquiry slip ▲

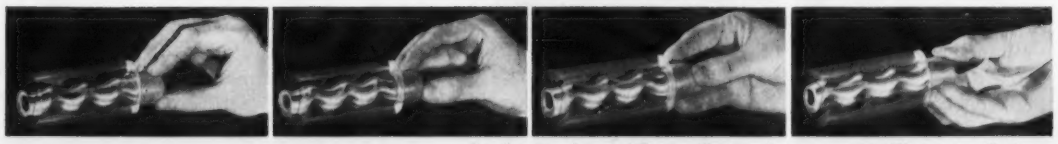
from abrasive slurries to delicate foods

MOYNO® PUMPS

. . . cut handling costs



The Moyno "progressing cavity" pumping principle has enabled thousands of plants to pipe difficult materials that were transported by hand and other expensive means. Moyno is the only pump that can handle many abrasives, pastes, slurries, chemicals, foods, etc. without foaming, aerating, crushing or excessive pump wear.



As shown above, Moyno Pumps have a screw-like rotor that revolves in a double threaded stator creating progressing cavities which smoothly move material through the pump. They will pump anything that will move through a pipe . . . even plaster and non-pourable pastes! Moyno Pumps are available in capacities up to 500 gpm and pressures up to 1000 psi.

Examine your processing methods. No doubt there are several places where Moyno Pumps can drastically cut costs. Ask us, we'll give you a frank answer. Send us an outline of your problem today! Write for Bulletin 30-NE.

ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO / BRANTFORD, ONTARIO

Motors · Fans · Hoists · Moyno® Pumps · Propeller (Industrial) Fans

▲ For more details circle **NED-208 M8** on enclosed inquiry slip ▲

SAND CASTERS using
METAL PATTERNS
SAVE MOLDS with

IMS SILICONE SPRAY MOLD RELEASE

SAND MOLDERS
PERMANENT MOLDERS

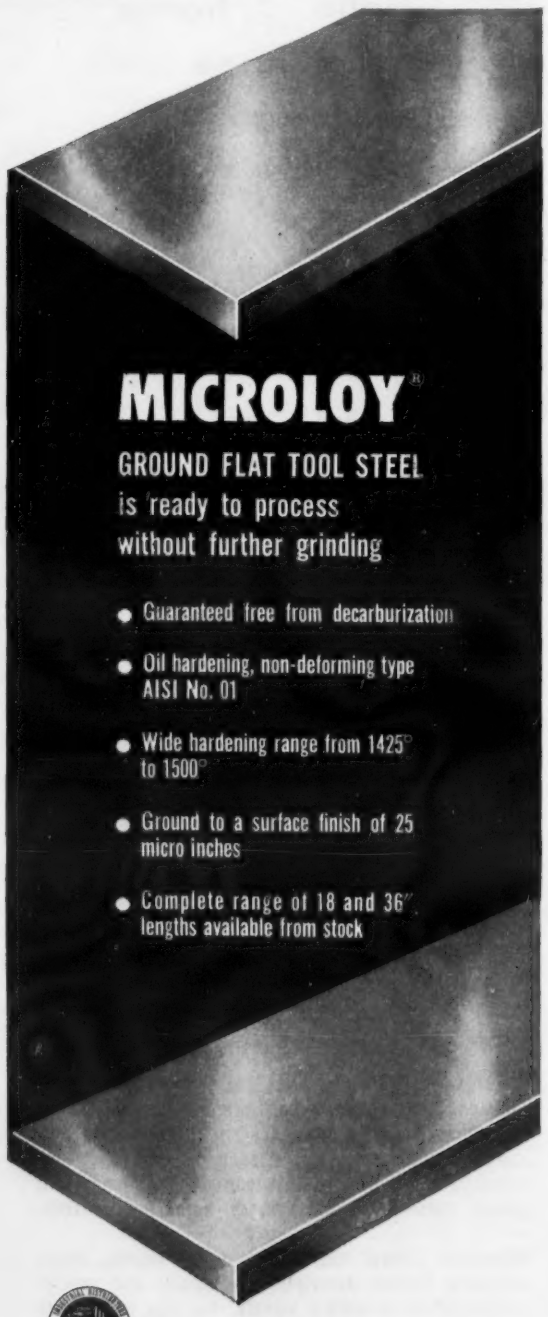
Check These Features:

- This high temperature release keeps sand from adhering—saves molds!
- Wets and adheres to all metal surfaces.
- Will not form carbonaceous deposits.
- Completely stable at all molding temperatures.

PRICES: Silicone Spray
(Delivered)
PRICE PER CAN.....$ 2.00
UNBROKEN DOZEN.... 18.00
UNBROKEN GROSS.....197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE ROAD • WYoming 1-1424 • CLEVELAND 20, OHIO

▲ For more details circle NED-213 M8 on enclosed inquiry slip ▲



MICROLOY®
GROUND FLAT TOOL STEEL
is ready to process
without further grinding

- Guaranteed free from decarburization
- Oil hardening, non-deforming type AISI No. 01
- Wide hardening range from 1425° to 1500°
- Ground to a surface finish of 25 micro inches
- Complete range of 18 and 36" lengths available from stock

See Your Capewell Distributor

CAPEWELL

THE CAPEWELL MFG. CO.
HARTFORD 2; CONN.

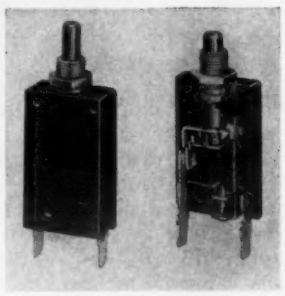
▲ For more details circle NED-214 M8 on enclosed inquiry slip ▲

ADJUSTABLE VISE
holds irregular-shaped pieces

A pair of pivoted members, mounted on a heavy swivel turret, comprise the sliding front jaw of the All-Shapes vise. The unusual combination of swivel and pivoting action allows the two members to equalize and adjust to grip practically any shape workpiece. Multipoint contact distributes jaw pressures widely and evenly so that even thin-walled shapes or fragile materials can be held firmly and without distortion. Vise is available in either clamp-on (C-300) or swivel-base (S-300) models with 3-in. capacity. Made by **R. S. Wilder, Inc.**, 26 Bedford St., Waltham 54, Mass.

▲ For more details circle NED-215 M8 on enclosed inquiry slip ▲

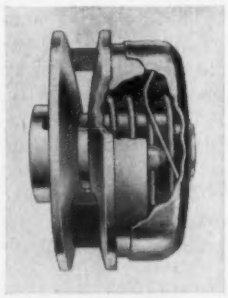
MINIATURE CIRCUIT BREAKER
in 0.05 to 25 amp ratings



Unusual trip-free mechanism of Model 45-700-P miniature circuit breaker prevents breaker reset while overload condition prevails. Depression of the reset button will not interrupt the circuit once the breaker is closed. Unit is used to protect appliances, tools, motors, electronic equipment, and other electrical devices. It can be installed singly or in banks and will withstand surge currents up to five times rated current. It will carry continuous current at an ambient of 68° F. Ratings range from 0.05 to 25 amp. Made by **E-T-A Products Co. of America**, 6284 N. Cicero Ave., Chicago 46, Ill.

▲ For more details circle NED-216 M8 on enclosed inquiry slip ▲

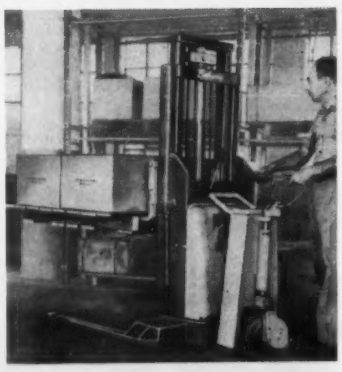
VARIABLE SPEED PULLEYS
speed unaffected by load



Cam which automatically maintains required belt tension for a given load enables the Hi-Lo FHP line of variable speed pulleys to maintain a constant selected speed, regardless of wide variations in load. The compact units are available in ½, ¾, and 1-hp ratings at 1750 rpm. The ½-hp pulley is available with either high impact plastic or cast iron face. The others are cast iron. Speed ratios vary from 2:1 for the ½ and ¾-hp models to 2½:1 for the 1-hp model. Made by Hi-Lo Mfg. Co. and distributed by **Lovejoy Flexible Coupling Co.**, 4941H W. Lake St., Chicago 44, Ill.

▲ For more details circle NED-217 M8 on enclosed inquiry slip ▲

ELEVATING TRUCK DRIVE
will propel other wheeled equipment



Electro - hydraulic driven Load - Jockey attachment can be mounted on almost any portable elevating truck containing a battery-powered hydraulic lift to make it self-propelled. The compact 2000-lb capacity unit is also suited for driving other similar wheeled devices. Attachment has a wide face, rubber-tired driving wheel with a built-in hydraulic motor. The control and steering handle automatically returns to the "off" position when released. The truck moves in the direction the handle is moved. If the optional drive wheel safety guard touches the operator's foot, it cuts off the power and applies a brake. Attachment is by four bolts. Unit is 30 in. high and 15½ in. wide. Power is derived from the truck's battery. Made by **American Pulley Co.**, 4200 Wissahickon Ave., Philadelphia 29, Pa.

▲ For more details circle NED-218 M8 on enclosed inquiry slip ▲

Fast CUTTING-OFF
the Modern Way
TUBING and BAR STOCK

Automatic operation—from loading to final cut-off. Handles tubing up to 8" O.D. Very fast. With special tools, parts being cut off may be formed, grooved, flanged or chamfered in a single operation—at a high rate of speed.

WRITE
New catalog describes all models — gives production figures. Mailed on request.

MODERN MACHINE TOOL CO.
2005 Losey, Jackson, Michigan

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this FREE bulletin tells you all about the new WATLOW FIRERODS CARTRIDGE HEATER

All About:

- An amazing concentration of heat in 1/5th the space of ordinary units.
- Tests that prove longer operating life at higher watts densities — 5 to 10 times the life of ordinary units.
- Methods for determining your operating needs (charts, etc.) . . . for all this, and more —

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WATLOW
ELECTRIC MANUFACTURING CO.
1374 Ferguson Avenue
Saint Louis 14, Missouri

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NEW BALANCED CUTTING ACTION
Severance
ECARNO-MILLS
THE ECONOMY MILL NEW DESIGN NEW CARBIDE

Make your money count! Replace more H.S. Rotaries and Mounted Grinding Points.

A NEW LOW PRICED HIGH CLASS PERFORMER

SOLID CARBIDE CUTTING HEADS

22 Shapes and Sizes Available

Made by the originator of ground-from-the-solid Rotary Files, and pioneer in this type of Carbide Mill, who presently offer the largest range of standard types, shapes, and sizes.

YOUR SPECIAL DEBURRING PROBLEMS ARE SOLICITED

OPERATE EFFICIENTLY AT USUAL CARBIDE SPEEDS, YET PERFORM BEAUTIFULLY AT THE SLOWER SPEEDS OF STEEL CUTTERS

PHONE, WIRE, OR WRITE US NOW FOR PRICES

Severance TOOL INDUSTRIES INC.
761 Iowa Ave., Saginaw, Michigan
Ask for a Severance catalog today!

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NEW IDEAS
TO DOUBLE YOUR STORAGE CAPACITY

The FRICK-GALLAGHER MFG. CO.

112 S. MICHIGAN AVE., WELLSTON, OHIO J-3A

BONDERIZED STEEL EQUIPMENT FOR EVERY STORAGE NEED

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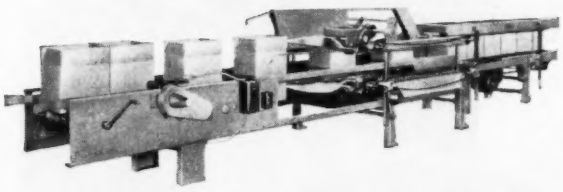
SEAL CASES AUTOMATICALLY



Speed production, and cut costs — no operator needed! Aligns loaded corrugated shipping cases, glues flaps, seals and discharges — all automatically. Available for a wide range of case sizes, for use with your present automatic packing equipment, or on a hand-packing line. Semi-automatic models also available. Write for literature.

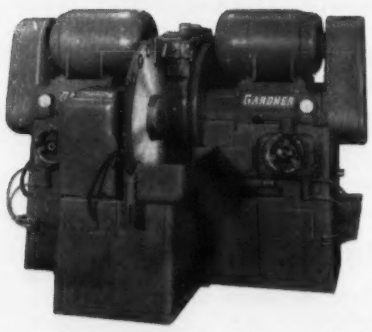
Packomatic®
T.M. Reg. U. S. Pat. Off.

J. L. FERGUSON CO. • JOLIET, ILLINOIS

PACKOMATIC machines include the Bale Sealer — Case Sealers — Opener-Loaders — Case Imprinters — Telescoping Volumetric Filler — Packer-Gluers. Units available, semi-automatic or fully-automatic.

▲ For more details circle NED-223 M8 on enclosed inquiry slip ▲

grind TWO parallel surfaces in ONE operation . . . accurately



Gardner 2H30 Precision Double Spindle Grinder

greater stability of new 2H30 grinds to closer tolerances

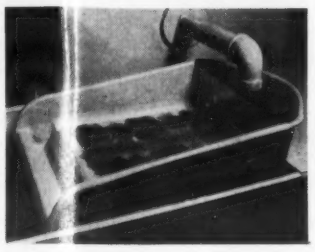
Get complete data in Catalog 2H30-55

GARDNER precision disc grinders

GARDNER MACHINE COMPANY
460 Gardner St.
Beloit, Wisconsin

▲ For more details circle NED-224 M8 on enclosed inquiry slip ▲

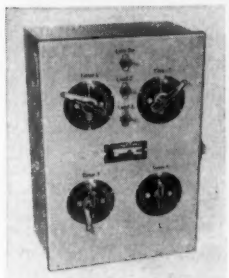
MAGNETIC COOLANT CLEANER
has 15-gpm coolant capacity



Ferrous contaminants are removed from grinding and other metalworking coolants by the Kebby Mite coolant cleaner, composed of a Fiberglas tray supported by a magnetic retainer plate. Heavy Alnico magnets and gravity tend to collect the contaminant in regular rows of tufts. These tufts act as filters to remove nonferrous materials. Separator has a capacity of 15 gpm of water soluble oil or chemical type coolant. It measures 15 x 21 in. and mounts over the coolant tank for gravity operation. Price is $79.50. Made by **Kebby Co.**, 2320 Custer Ave., Rockford, Ill.

▲ For more details circle NED-225 M8 on enclosed inquiry slip ▲

DIAL SET TIMER
accurate to 2/10 of 1 per cent

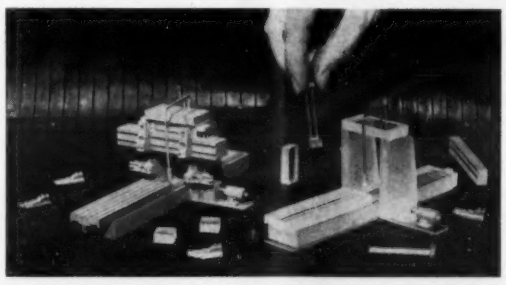


Complex process or machine cycles can be controlled by Type 3400 synchronous motor-driven dial set timer, accurately within 0.2 per cent. Instant reset is available in 13 timing ranges, from 60 cycles full dial for welding timing, to 60 hours maximum time for ball mill control. Circuit combinations include time delay, multiunit sequence control, percentage time, and elapsed time indicating. Load contacts are rated 10 amp. Self-contained transformers are available to operate the timer from 230 or 460-v lines. NEMA 1, dust-tight, and JIC enclosures are available as well as subbase and panel mounts. Made by **National Time & Signal Corp.**, 21800 Wyoming Ave., Detroit 37, Mich.

▲ For more details circle NED-226 M8 on enclosed inquiry slip ▲

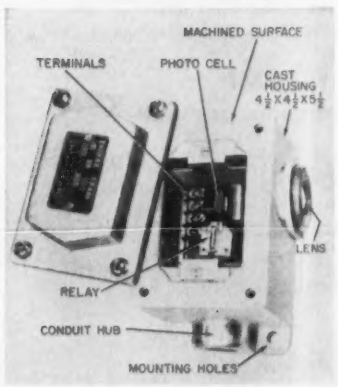
3-D PLANT LAYOUT KITS
include scaled machinery models

Three-dimensional plant layout is facilitated with these self-assembled machine tool kits. They include planing mills, lathes, milling machines, drilling and sawing machines, sheet metal machines, office equipment, and others, all scaled to size. Extra parts, such as pipe, fittings, and motors are also available to aid planners in solving plant layout problems. Kits are made by **Scott Industries, Inc.**, Olean, N. Y.



▲ For more details circle NED-227 M8 on enclosed inquiry slip ▲

EXPLOSIONPROOF PHOTORELAYS
for severe production applications



Moisture, dirt, shock, vibration, and temperature extremes will not affect this Type RPFE1 explosionproof photorelay for severe machinery and production applications in hazardous atmospheres. Unit operates on 100-130 v at 25-60 cycles and is controlled by 8 ft-c of light from a light projector in an identical explosionproof housing. Projector and photorelay can be placed up to 20 ft apart. Maximum recommended counting rate is 600 per min. Relay contacts are rated 5 amp, single-pole double-throw. Units are mounted by means of either the two mounting lugs, or from ¾-in. conduit hub. Made by **Photobell Co.**, 43 Vesey St., New York 7, N. Y.

▲ For more details circle NED-228 M8 on enclosed inquiry slip ▲

NEW!

MERRILL THIRD HAND CLAMP

The ultimate in Holding Devices, this all forged precision machined instrument is the modern approach to your holding problems — whether you need a temporary jig or fixture for drilling, welding, machining, or a portable vice that can be quickly repositioned.

Third Hand is made of high quality forged steel, precision machined and corrosion resistant treated.

Just a twist and the swivel can be disassembled and reassembled to attain a minimum of 40 combinations.

Obtainable in 2" and 4" capacities.

For literature giving complete information, write . . .

MERRILL BROTHERS

56-62 Arnold Ave., Maspeth, N. Y.

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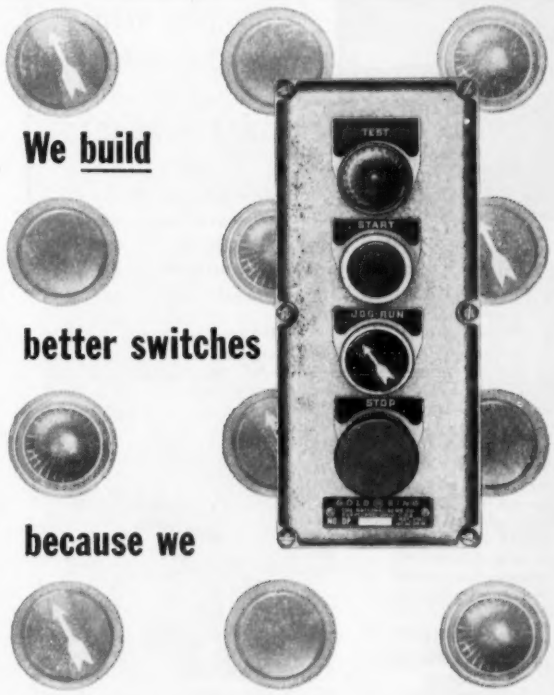
We build better switches because we can't buy them . . .



It's as simple as that . . . and they cost no more than other switches

We had to build Gold-N-Ring Control Switches to meet our own high reliability specifications . . . our reputation was a part of this important fact. We're machine tool builders. We can't afford to be responsible for costly down-time on important capital investment equipment due to inferior control switches. That's why we build them like precise machine tools . . . and why it will pay you to check with us.

A wide range of basic units meets practically every need . . . as well as completely assembled stations in 1 to 4 button sizes to meet your electrical specifications. Ask our representative to call, or send for Bulletin ECS-56 . . . the complete selection and ordering guide.

◀ **Limit Switches.** A full line, used wherever the highest reliability factors are required. Bulletin EM-51.

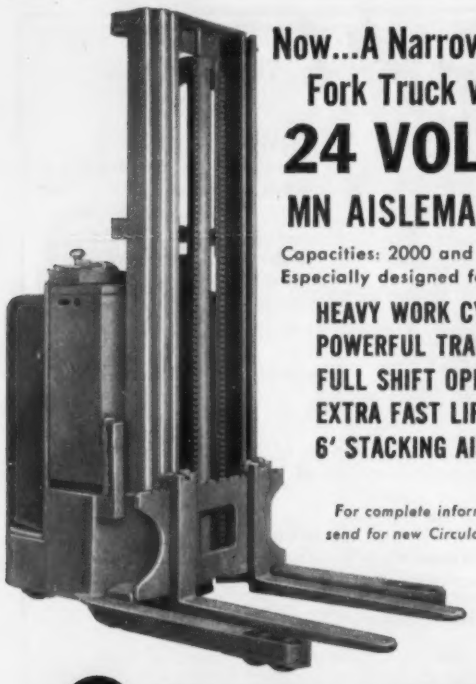
Solenoids. A full line of standard and custom units for AC or DC. Bulletin EM-52A. ▶

ELECTRICAL MANUFACTURING DIVISION

National Acme

THE NATIONAL ACME COMPANY
182 E. 131st STREET
CLEVELAND 8, OHIO

▲ For more details circle NED-230 M8 on enclosed inquiry slip ▲



Now...A Narrow Aisle Fork Truck with

24 VOLTS

MN AISLEMASTER

Capacities: 2000 and 3000 lbs.
Especially designed for:

HEAVY WORK CYCLES
POWERFUL TRACTION
FULL SHIFT OPERATION
EXTRA FAST LIFTS
6' STACKING AISLES

For complete information send for new Circular 35K.

LEWIS-SHEPARD®
1712 Walnut Street, Watertown, Mass.
The MASTER® Line—The COMPLETE Line of Materials Handling Equipment

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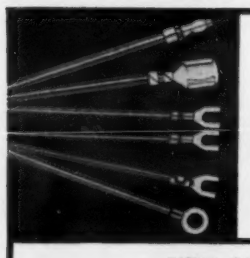
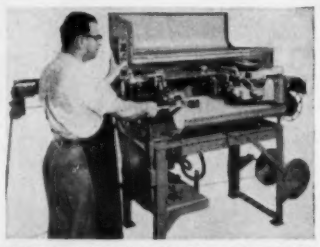


DO YOU NEED
AUTOMATION
for
FINISHED WIRE LEADS
with
Terminals Attached?

NEW ARTOS TA-20-S
Performs 4 Operations Automatically!

1. Measures and cuts solid or stranded wire 2" to 250" in length.
2. Strips one or both ends of wire from 1/8" to 1".
3. Attaches any prefabricated terminal in strip form to one end of wire. (Model CS-9-AT attaches terminals to BOTH ENDS OF WIRE simultaneously.)
4. Marks finished wire leads with code numbers and letters (optional attachment).

UP TO 3,000 finished pieces per hour. Can be operated by unskilled labor. Easily set up and adjusted to different lengths of wire and stripping. ENGINEERING consultation without obligation. Machines for all types of wire lead finishing.



AGENTS THROUGHOUT THE WORLD

WRITE for FREE Bulletin No. 655 on Artos TA-20-S

ARTOS ENGINEERING CO.
2751 South 28th Street • Milwaukee 46, Wisconsin

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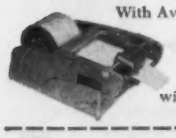
use
AVERY
PRESSURE-SENSITIVE
LABELS
for hundreds of industrial applications

In every department...from receiving to shipping...from receptionist to top management...there are many spots where Avery labels are saving industry thousands of dollars every year. Self-adhesive, they simplify and speed work wherever there's a need to *identify or inform, to warn, mask, inspect, merchandise or price.* You can save *time* and *money* with Avery labels.



With Avery electric dispensers labeling is as much as 5 times faster than with ordinary methods!

Write today for complete information.

AVERY ADHESIVE LABEL CORP., Custom Div. 102D
117 Liberty St., New York 6 • 608 S. Dearborn St., Chicago 5 • 1616 S. California Ave., Monrovia, Calif. • In Canada, 48 Haas Road, Toronto 15, Ont. • Offices in Other Principal Cities

☐ More information, please...and free samples.
☐ Please have the Avery man call.

NAME
COMPANY
ADDRESS
CITY ZONE STATE
OUR BUSINESS IS:

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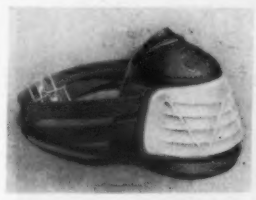
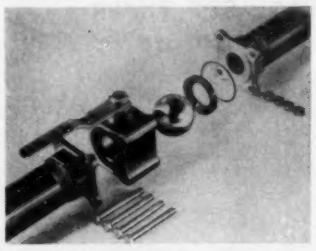
PLASTIC RESPIRATOR
is 2.1-oz electrostatic type



Protection against dusts, pneumoconiosis - producting mists, and chromic acid mists is provided by the Air-Raider 2.1-oz modified polyethylene respirator. This treated - wool electrostatic unit has unusual valve construction and location which reduces inhalation and exhalation resistance. Frame cushion-fits various face shapes and head sizes. Four-point suspension of double headbands assures positive seal with minimum pressure. Made by **Welsh Mfg. Co.**, 12 Magnolia St., Providence 9, R. I.

▲ For more details circle NED-234 M8 on enclosed inquiry slip ▲

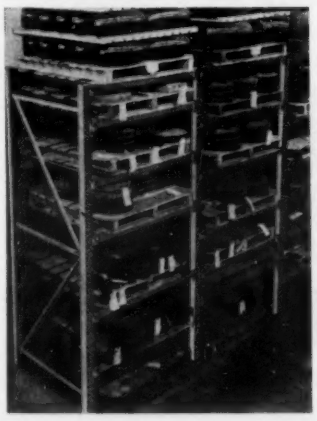
BALL VALVES
serve as both valve and union



Suited as roughing and forepressure controls, Series VB straight-through ball valves for vacuum use serve as both valve and union. Because of three-piece construction, valve center can be removed without disturbing union ends. Seating surface or O-rings can be replaced in minutes. The 1/2, 1, 1 1/2, and 2 in. sizes are installed by either NPT pipe connections, or by sweat soldering. A 3/4-in. size is available only in sweat-soldering type. Valve body is cast bronze, and ball valve is chrome-plated bronze. Buna-N gaskets and O-rings are used, although Teflon gasketing is also available. An air cylinder for remote control is obtainable. Made by **Consolidated Electrodynamics Corp.**, Rochester Div., 1775 Mt. Read Blvd., Rochester 3, N. Y.

▲ For more details circle NED-235 M8 on enclosed inquiry slip ▲

ADJUSTABLE STORAGE RACK
shelf-lock eliminates bolts, nuts



Tools, bolts, and nuts are not required to assemble SpaceMaker adjustable storage rack which features the Shelf-Lok, a shelf-locking device included at each end of a pair of horizontal load supports. They attach to the slotted vertical side frames and accommodate up to 5000 lb loads. Supports are positioned to the frames from the rear with the Shelf-Lok fitting into the slots, then secured by its hook for a safety lock. Frame slots are located every 3 in. Vertical frames have welded structural steel cross bracings. L-shaped horizontal load supports hold 1 or 3/4-in. plywood panels for storing lightweight bulk items. Deck planking can be used over crossbars suspended between supports for heavy loading. Made by **Rack Engineering Co.**, 168 Sixth St., Connellsville, Pa.

▲ For more details circle NED-236 M8 on enclosed inquiry slip ▲

VERTICAL SLURRY PUMP
for submerged sump service

Heavy slurries of sand, coal, tailings, crystals, chemical sludges, or abrasive plant drainage can be handled by the Type RXV heavy duty slurry pump. Designed for wet pit sump service, it is offered in nine models varying in size from 2 to 8 in. The submerged low speed unit is suited for continuous duty with both heavy and fine slurries. Only four bolts clamp the liquid end of the pump. All wearing parts are interchangeable with the RX horizontal pump unit. Bearings are water lubricated, but grease lubrication is optional. Made by **Morris Machine Works**, 20 E. Genesee St., Baldwinsville, N. Y.

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This will help you choose the right Farval system

WHETHER your equipment needs oil or grease—occasionally or frequently—in small amounts or large, there's a Farval automatic or manual centralized system of lubrication designed *right* for the job! Any Farval system is easily installed at any convenient place on or near a machine. Each system includes central pumping unit, two main supply lines, Farval Dualine measuring valve for each bearing and lines connecting valves to bearings.

GET DATA ON THE COMPLETE FARVAL LINE BY WRITING FOR FREE BULLETIN 26

THE FARVAL CORPORATION
3283 East 80th Street • Cleveland 4, Ohio

Affiliate of The Cleveland Worm and Gear Company, Industrial Worm Gearing

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CALCULAGRAPH computes and prints ELAPSED TIME on job cards *Automatically*

GIVES YOU—
- Accuracy
- Exact Job Cost Data
- Production Time
- Department Time

One CALCULAGRAPH Serves an entire Department

Calculagraph will fit into your *present* system. It *computes* and *prints* ELAPSED TIME automatically on your job cards. It eliminates costly clerical time and additional equipment—assures 100% accuracy. Furthermore, the flexibility of Calculagraph makes it adaptable to *any* system.

And remember, too, that CALCULAGRAPH

- *is simple to use*
- *automatically deducts non-working hours (rest periods, lunch time, etc.)*
- *is a self-contained unit—needs no MASTER CLOCK*
- *is used throughout industry the world over.*

Get the full facts about CALCULAGRAPH NOW. You'll find that cost and production data can be yours more accurately, faster, automatically.

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307 Sussex Street • Harrison, New Jersey

MANUFACTURERS OF ELAPSED TIME COMPUTERS FOR OVER 65 YEARS

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Something much finer in a dial thermometer: finer because it is the bourdon tube type of thermometer at its best...embodies the greater precision and lasting accuracy of the Marsh Pressure Gauge.

Both vapor tension and gas-filled types are available in either distant reading or rigid stem types. In the broad Marsh line you have a complete selection of temperature ranges, case sizes, styles, and finishes.

Ask for the Thermometer Catalog

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Marsh Instrument & Valve Co., (Canada) Ltd.
8497 103rd St., Edmonton, Alberta, Canada
Houston Branch Plant, 1121 Rothwell St.
Sect. 15, Houston, Texas

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You and KESTER Can Lick Any Soldering Problem!

Kester, with more than fifty years experience in solving every conceivable type of soldering problem, is the only company to turn to for a fast economical solution. No problem is too large or too small and what's more, there's no obligation involved for this engineering service.

KESTER SOLDER
COMPANY 4249 Wrightwood Avenue • Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

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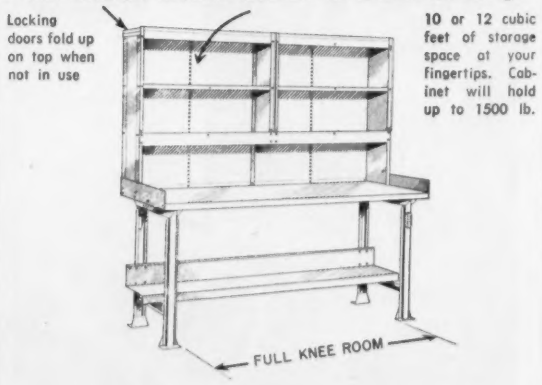
THE ANSWER:

BAY "HANDICABINET"® BENCHES
—The Greatest Modern Advance in workbench design

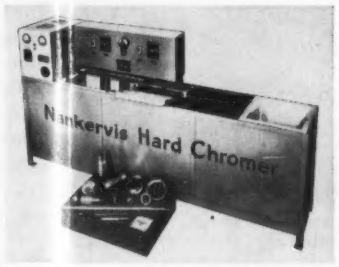


Throw away your stone age workbench! Now available for immediate shipment are these which make all others obsolete. Keep your working area uncluttered, yet with all necessary tools and equipment at your fingertips. Write today for our catalog and the name of your local Bay Distributor.

BAY PRODUCTS INC.
1821 W. Cambria St., Philadelphia 32, Pa.

▲ For more details circle **NED-242 M8** on enclosed inquiry slip ▲

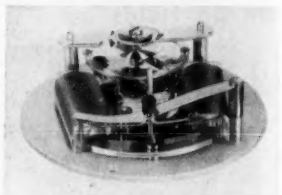
HARD CHROME PLATING UNIT
plates to within 0.0001 in.



Tanks, rectifiers, automatic heating elements, and controls comprise the Hard Chromer package which will chrome plate tools, gages, and other parts to within 0.0001 - in. tolerance. This eliminates need for grinding after plating. The self-contained unit is easy to install and operate. It has high "throwing power" and can plate in grooves, recesses, and shoulders, yet maintain sharp, clean corners. Plate does not chip, flake, or spall, and has excellent resistance to wear, erosion, and corrosion. Made by **George L. Nankervis Co.**, 15300 Fullerton Ave., Detroit 27, Mich.

▲ For more details circle **NED-243 M8** on enclosed inquiry slip ▲

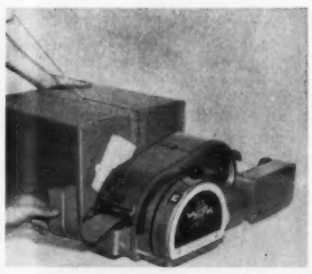
PULSE TIMER
powered by integral dc battery



Accurate over a wide range of environmental conditions, this direct-current pulse timer has its own battery power source and is suitable for light-duty military and industrial applications where space is critical. Movements can be supplied for 1.5 to 12 v dc. A C-size 1.5-v cell operates timer 2 years. Timer life is over 20,000 hours. Tests indicate a ±0.01 per cent accuracy at normal temperatures, and a ±0.25 per cent accuracy over a 10 to 110° F range and ±10 per cent voltage variation. Basic unit is available in a clear plastic housing, or in a dustproof tin for use with isolated power source. Made by **Hamilton Watch Co.**, Allied Products Industrial Div., Lancaster, Pa.

▲ For more details circle **NED-244 M8** on enclosed inquiry slip ▲

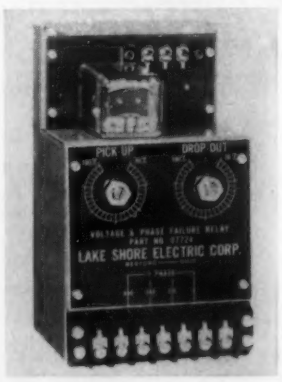
TAPE DISPENSER
for kraft and center-tear tapes



Itstix kraft or reinforced sealing tapes with a center tear-tape and starting tab are dispensed by the National electric Model 98 Vuematic CN machine. The center tear-tape facilitates the opening of well-sealed cartons and containers without tools. The dispenser activates, laminates, and dispenses the tapes in lengths to requirements. The hand control knob for preselecting tape length from 6 to 70 in. and the curved switching bar makes possible operation with a single motion of either hand. Machine takes standard rolls of paper or fiber reinforced tape from 1 to 4 in. in diameter. Made by **Nashua Corp.**, 36 Franklin St., Nashua, N. H.

▲ For more details circle **NED-245 M8** on enclosed inquiry slip ▲

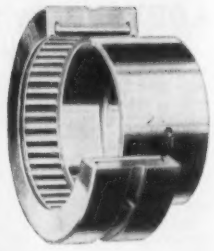
VOLTAGE SENSING RELAY
has plug-in relay, printed circuit



Control range of 70 to 100 per cent of rated voltage for both drop-out and pick-up with a minimum 1-v differential is provided by this differential voltage sensing relay. It employs a simple printed circuit with a standard plug-in single - pole double-throw relay to open and close circuits. Accurate settings are obtained by using variable potentiometers. Unit will protect power and lighting systems, industrial motors, machine tools, and process equipment. Relay is designed for 6 to 49 v dc and 50 to 250 v dc. Alternating current service range includes both single and three-phase, three and four-wire. Standard alternating current relays are available in open models or with NEMA Type 2 closures. Made by **Lake Shore Electric Corp.**, 205 Willis St., Bedford, Ohio.

▲ For more details circle **NED-246 M8** on enclosed inquiry slip ▲

For heavier loads in smaller space



Use McGill *MULTIROL*® full type needle roller bearings

MULTIROL SE series bearing construction provides a full complement of small diameter rollers in a hardened and ground outer race. This packs maximum load capacity in minimum radial space.

Precision ground rollers and retaining end shoulders built integral with the outer ring eliminate loose or welded-in end washers; assure ease of assembly, precision performance and longer life. Simplified grease lubrication reduces maintenance.

For greater radial space savings on a larger hardened and ground shaft, the outer ring and roller assembly may be used without an inner.

Write for helpful Bearing Handbook No. H-54-B

engineered electrical products
McGILL
precision needle roller bearings

McGILL MFG. CO., Bearing Div., 101 N. LAFAYETTE ST., VALPARAISO, INDIANA

▲ For more details circle **NED-247 M8** on enclosed inquiry slip ▲

Better Prints . . .
Easier Printmaking . . .
Big, new operating features

The Printmaster 810

Here's the advanced Printmaster 810 — that outdates every other whiteprinter in its price class. Now, you can assure yourself of better whiteprints, more easily, in less time, with these advanced features:

More compact—lower in height . . . saves valuable floor space, allows easier lamp replacement, better control . . . means less fatigue; **new design of brush feed assembly** . . . to automatically control curled edges, folded corners; **new print pick-off** . . . prevents tearing, sticking or scratching; **improved tracing release** . . . convenient release pedal means immediate control of tracing and print—no loss of time and material; **cool cylinder design** . . . practically no sticking in processing plastic-coated materials and foils; *new* **FILTERED air system** . . . Fiberglas® filter delivers filtered air—for cleaner machine, cleaner prints—means less shut-down time for cleaning.

And Ozalid offers other great *proven* features such as new steel frame support . . . double paper rods . . . both rear and front delivery . . . and U/L approved safety devices.

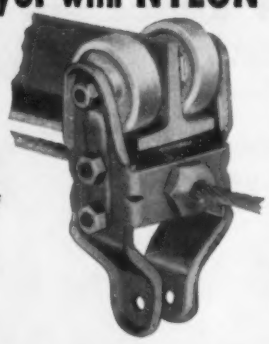
Why not test-run your own tracings through the new "810"? Simply call your local Ozalid representative. Or write: Ozalid, Dept. W-12, Johnson City, N. Y.

OZALID®
First Name in Whiteprinting

A Division of General Aniline & Film Corporation
In Canada: Hughes Owens Company, Ltd., Montreal

▲ For more details circle **NED-248 M8** on enclosed inquiry slip ▲

CLEAN!
AMERICAN "Cable-Way" Conveyor with NYLON WHEELS



Open T-rail track and trolleys are easily cleaned, with water or air hose.

Adaptable for explosion-proof installations.

Nylon wheels are almost noiseless.

No grease drippings. Most installations require no lubrication. Others minimum amount. Can be water-lubricated.

Galvanized or stainless steel cable.

Operates in moist conditions with minimum of maintenance.

The American "Cable-Way" Conveyor with nylon-wheeled trolleys requires grease lubrication only on the motor drive and idler sprockets. All-bolted track and suspension system makes installation fast and easy. Low-cost and dependable. Handles loads up to 250 lbs. per trolley.

(Left) Steel wheels are also available for average industrial installations.

CONVEYOR DIVISION
THE AMERICAN MONORAIL CO.
Fourth & Franklin Streets • Tipp City 7, Ohio

For more details circle NED-249 M8 on enclosed inquiry slip

MARSHALLTOWN

ROTARY THROATLESS SHEARS

CAPACITIES
18 GAUGE TO ½"
CUTS ANY SIZE... ANY SHAPE

America's finest for every cutting job — straight, irregular or circular patterns.

Speedy—up to 6 ft. per minute. Efficient, easy to operate.

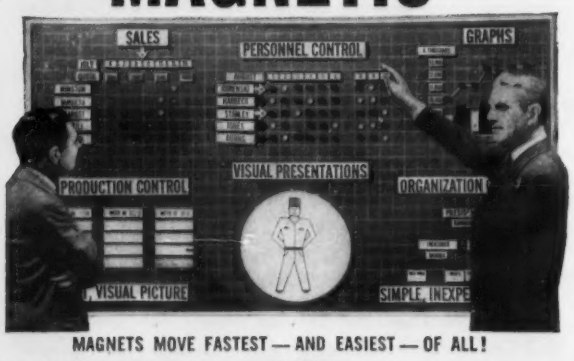
Built for extra heavy duty use. High grade tool steel cutters.

Write Today for Details and Prices

MARSHALLTOWN MFG. COMPANY
MARSHALLTOWN 2, IOWA

For more details circle NED-250 M8 on enclosed inquiry slip

VISUAL **MAGNETIC** CONTROL



MAGNETS MOVE FASTEST — AND EASIEST — OF ALL!

SIMPLEST VISUAL SYSTEM FOR
- Production
- Personnel
- Sales
- Maintenance
- Scheduling
- Machine Loading
- Charts—Graphs
- Visual Presentations

COLORFUL MAGNETIC ELEMENTS
- show facts instantly
- organize for action
- eliminate mistakes
- get the job done

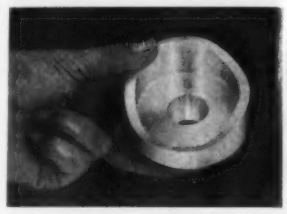
PRICED FROM $38 INCLUDING MAGNETIC ELEMENTS

PRICE LIST & BROCHURE NE12 FREE ON REQUEST

REPRESENTATION DESIRED IN SOME AREAS
Methods Research Corp.
442 Mosel Avenue, Staten Island 4, New York

For more details circle NED-251 M8 on enclosed inquiry slip

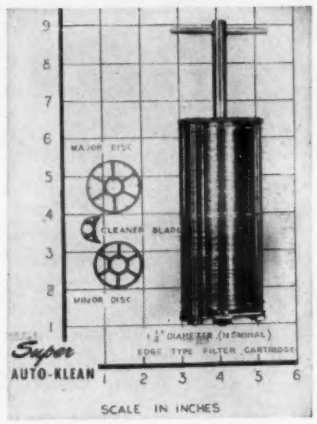
PROTOTYPE CAMS generated by speedier method



Prototype cams can now be generated in a shorter time than previously possible by a process in which most preparatory engineering is done by an automatic computer. Process needs only the points on the cam surface dictated by the application. Cam contour is automatically computed to give near optimum dynamic characteristics consistent with passage through the specified points. Data are then fed to a servo-controlled machine tool which cuts the finished cam. This division fabricates the cams on a service basis and delivery can usually be made within 48 hr. Face, cylindrical, and disc cams can be generated by the method. Limited quantity runs are also feasible. Made by **Howard Holmes, Inc.**, Cam Engineering Div., 447 Tarrytown Rd., White Plains, N. Y.

For more details circle NED-252 M8 on enclosed inquiry slip

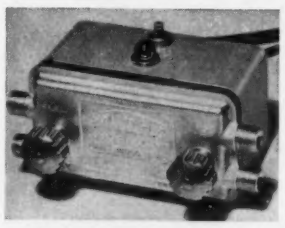
FILTER CARTRIDGE removes 40-micron particles



All-metal, edge-type filter cartridge for lubricating, hydraulic, and fuel oil applications is conservatively rated for removal of 40-micron particles. A typical unit, measuring only 4 in. face to face, handles more than 7½ gpm of 50-SSU fluid at 2 psi pressure drop. The compact, cleanable cartridge fits a wide range of standard housings. Head and cartridge assemblies, for use as integral parts of equipment, can be supplied. Made by **Cuno Engineering Corp.**, Dept. 51, S. Vine Street, Meriden, Conn.

For more details circle NED-253 M8 on enclosed inquiry slip

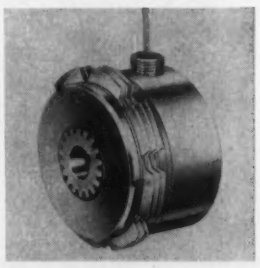
GAS CONTROL UNIT for welding, cutting operations



Flow of oxygen and fuel gas in welding and cutting operations is regulated by this gas control unit. Pushbutton switching of flame settings from high to low enables torch operator to obtain fast cutting starts with rapid reduction in preheat flames once cut is started. The H-1050 gas-saving valve is also suitable for brazing and heating, silver soldering, and intermittent heat treating or flame hardening. It has the capacity to operate up to eight machine cutting torches. Unit is solenoid operated and plugs into 110-v outlet. Neon light shows high flame setting. Foot-operated and hand-held remote control switches are available. Made by **Smith Welding Equipment Corp.**, 2633 Fourth St. S.E., Minneapolis 14, Minn.

For more details circle NED-254 M8 on enclosed inquiry slip

DISC TYPE ELECTRIC CLUTCH in static torques up to 2400 lb-ft

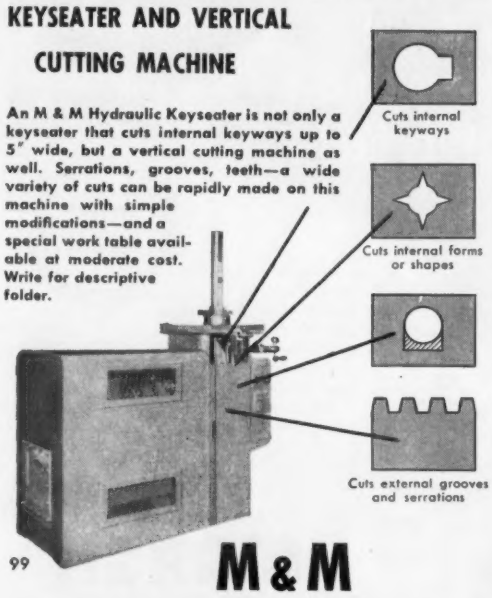


A range of ¾ to 3½-in. bore sizes is provided by Series 9000 flux-through, disc type electric clutches and brakes. Static torque ratings are up to 2400 lb-ft. Units combine a disc assembly with a new electro-magnetic operating mechanism. Engaged position is held by the action of magnetic flux passing through buttress plate, disc assembly, and end plate. Upon release, separators not only separate the discs individually, but also break up residual magnetism, assuring a positive "floating" neutral which will not creep, drag, or heat. Magnetic coil and housing are stationary at all times. Variable transformer or rheostat can change clutch torque capacity by varying the voltage. Standard unit operates on low wattage 90-v dc. Made by **Carlyle Johnson Machine Co.**, 50 Main St., Manchester, Conn.

For more details circle NED-255 M8 on enclosed inquiry slip

TRIPLE THE USEFULNESS OF YOUR **M&M** KEYSEATER AND VERTICAL CUTTING MACHINE

An M & M Hydraulic Keyseater is not only a keyseater that cuts internal keyways up to 5" wide, but a vertical cutting machine as well. Serrations, grooves, teeth—a wide variety of cuts can be rapidly made on this machine with simple modifications—and a special work table available at moderate cost. Write for descriptive folder.



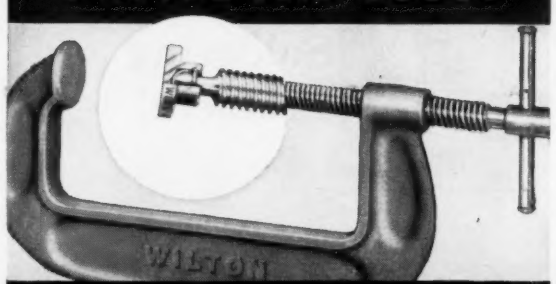
99 **M&M**

KEYSEATERS AND VERTICAL CUTTING MACHINES

MITTS & MERRILL • 1000 So. Water St. • SAGINAW, MICH.

For more details circle NED-256 M8 on enclosed inquiry slip

STOP C-CLAMP SWIVEL PAD LOSS!



PERMA PADS ARE GUARANTEED *NEVER* TO COME OFF!

Get Perma Pads Plus All These Features With Wilton C-Clamps!

Drop Forged Steel Or New Ductile Alloy • Extra Deep Or Standard Throat • Rapid Or Conventional Action • Copper Or Cadmium Plated Spindles • Every C-Clamp Individually Boxed

Attach this ad to your letterhead and mail today for FREE literature!

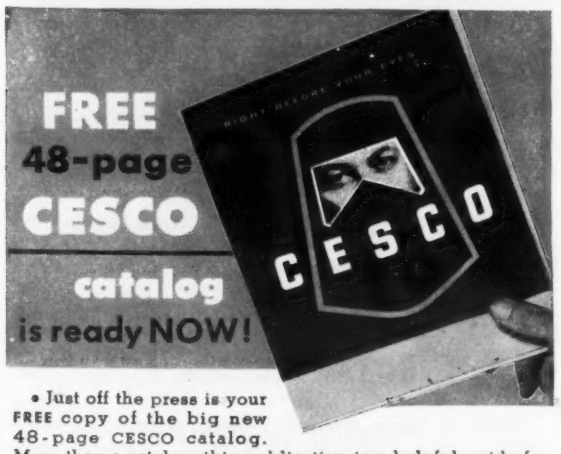
WILTON

WILTON TOOL MFG. CO., INC., DEPT. NED126, SCHILLER PARK, ILL.
Sold by leading distributors the world over.

For more details circle NED-257 M8 on enclosed inquiry slip

Facts on flex and expansion joints . . . that can save you maintenance and expenses are detailed in this bulletin. Send for your copy. Write Dept. 169, RESISTOFLEX CORPORATION, Roseland, N. J.

For more details circle NED-258 M8 on enclosed inquiry slip



• Just off the press is your FREE copy of the big new 48-page CESCO catalog. More than a catalog, this publication is a helpful guide for choosing the right safety protective equipment to meet your particular requirements. For example, there's a detailed chart listing the recommended safety equipment to use for 17 basic classifications of industrial hazards. In addition, there's a complete description and illustration of all the items in the CESCO line.

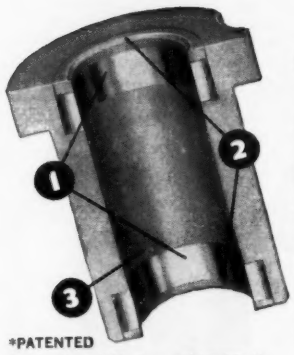
• You can get your FREE copy of the New CESCO catalog either of two ways—by contacting the CESCO distributor nearest you or by writing us direct. Get your copy today.

CESCO FOR SAFETY

CHICAGO EYE SHIELD COMPANY
2715 W. Roscoe St., Chicago 18, Illinois

▲ For more details circle NED-259 M8 on enclosed inquiry slip ▲

INCREASE PRODUCTION.. SAVE TIME & MONEY



MEYCO
Carbide Inserted Bushings Are Doing It Daily!

How? Like this: (1) Last longer . . . with a life—in most cases—as long as solid carbide bushings at prices that approach the price of steel bushings; (2) Increased life for your drill jigs and fixtures; (3) Increased life for your drills and reamers; (4) Accuracy maintained for a LONG PERIOD of time; (5) Less non-productive machine time, less lost man-hours, because bushings need not be changed as often; (6) Inspection time saved, because of greater accuracy for a longer time; and (7) Less waste due to spoilage, for the same reason. Don't pass up a good bet! Get the dope on MEYCO Carbide Inserted Drill Jig Bushings today!

*PATENTED
1. Tungsten carbide rings at the points of wear; 2. Steel rings protect drills and carbide; 3. Special hardened alloy steel body.

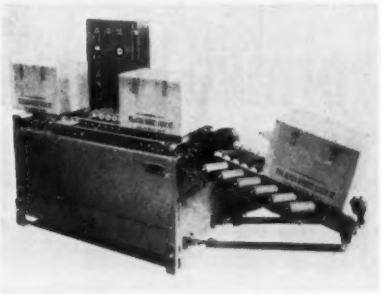
For information and prices write for MEYCO Bushing Catalog No. 49

ESTABLISHED 1888

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle NED-260 M8 on enclosed inquiry slip ▲

Exact Weight®



CASE AND BAG CHECKWEIGHER

Exact Weight's Model 1250 Selectrol for checking cases, cartons and bags from 20 lbs. to 100 lbs. offers accuracy one-tenth-of-one percent. Speeds to 30 units per minute. Model shown has over and under-weight rejection. Also supplied with underweight rejection only or without rejection mechanism. Optional equipment available for machine control, recording, counting and visible or audible signaling. Write for Form 3280.

Find us in your local 'Yellow Pages'

Sales and Service Coast to Coast

THE EXACT WEIGHT SCALE CO.
930 W. FIFTH AVE., COLUMBUS 8, OHIO
In Canada: 5 Six Points Road, Toronto 18, Ont.

BETTER QUALITY CONTROL...BETTER COST CONTROL

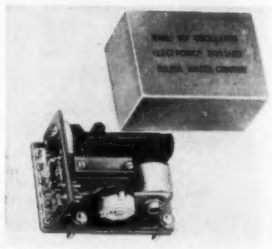
▲ For more details circle NED-261 M8 on enclosed inquiry slip ▲

AUTOMATIC SPRING COILER produces coils up to 1¼ in. OD

A variety of left or right hand coil springs can be produced from 0.005 to 0.040 - in. diameter round wire by this automatic spring coiler without special equipment or arbors. Simple adjustments on the machine's face can be made quickly for pitch, diameter, and length of spring. Standard equipment includes automatic controls, a ¾-hp 110-v ac motor, and steel base. Coils can range in diameter from 0.045-in. ID to 1¼-in. OD. Special tooling allows springs to be made from square, oval, flat, plastic coated, or enamel wire, as well as over 1¼-in. OD. Machine has a coiling speed of 40 to 280 ipm and maximum cutting cycle of 30 per min. Made by **Perkins Machine & Gear Co.**, West Springfield, Mass.

▲ For more details circle NED-262 M8 on enclosed inquiry slip ▲

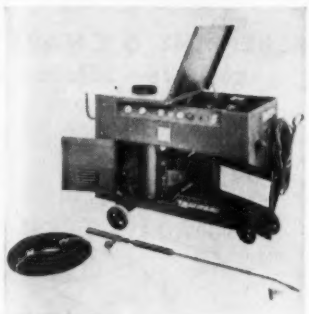
OSCILLATORS variable crystal controlled type



Automatic frequency control or variation of nominal frequency by the application of an external voltage are features of VCF Series of oscillators. They combine small size and high repeatability. Frequency range is from 10 kc to 20 mc, with obtainable variations up to 6 cps at 10 kc and up to 12 kc at 20 mc. The transistorized or tube type units have application in automatic frequency controls for missile guidance systems, closed loop frequency systems, and transducer-actuated measuring devices. Made by **Bulova Watch Co.**, Electronics Div. P-1102, 40-06 62nd St., Woodside 77, N. Y.

▲ For more details circle NED-263 M8 on enclosed inquiry slip ▲

HEAVY DUTY STEAM CLEANER in 1½ and 3-hp, 15-gal models



Automatic controls of this heavy-duty steam cleaner for industrial maintenance simplify its use. Down - draft burner has long flame travel to minimize soot and odors. Water pump delivers full capacity at all times. Antisyphon tank prevents back-flow to water supplies. Mixing of cleaning compound is entirely automatic, with solution fed into steam stream in desired strength emerging from gun as a super-saturated steam jet. Model 275 is rated 110 v, 1¼ hp, whereas 220-v Model 360 is rated 3 hp. Fuel and soap solution capacities of both models are 15 gal. Made by **Circo Equipment Co.**, 51 Terminal Ave., Clark, N. J.

▲ For more details circle NED-264 M8 on enclosed inquiry slip ▲

GEARSHIFT DRIVES for shaft-up vertical mounting

Used with geared devices, or V-belts and sheaves to step up or reduce output rpm, this gearshift drive for shaft-up vertical mounting can be used on drilling and tapping machines, material handling and special equipment. Integral motor units are available in ½ to 10-hp ratings with constant-horsepower output shaft speeds from 285 to 430 rpm in low, 570 to 865 rpm in second, 855 to 1295 rpm in third, and 1140 to 1730 rpm in high. With two-speed motors, the drive delivers eight output shaft speeds. Many electrical and mechanical modifications are possible. Made by **Lima Electric Motor Co.**, Dept. 125, Lima, Ohio.

▲ For more details circle NED-265 M8 on enclosed inquiry slip ▲

GAUGES NOW COMPLETELY CATALOGED WITH ENGINEERING DATA
FOR PROCESS & POWER INSTRUMENTATION

IN PLANT & O.E.M.

KUNKLE GAUGES

Complete, broad range line makes gauge application-specification easy with assured results backed by 50 years of gauge manufacturing experience.

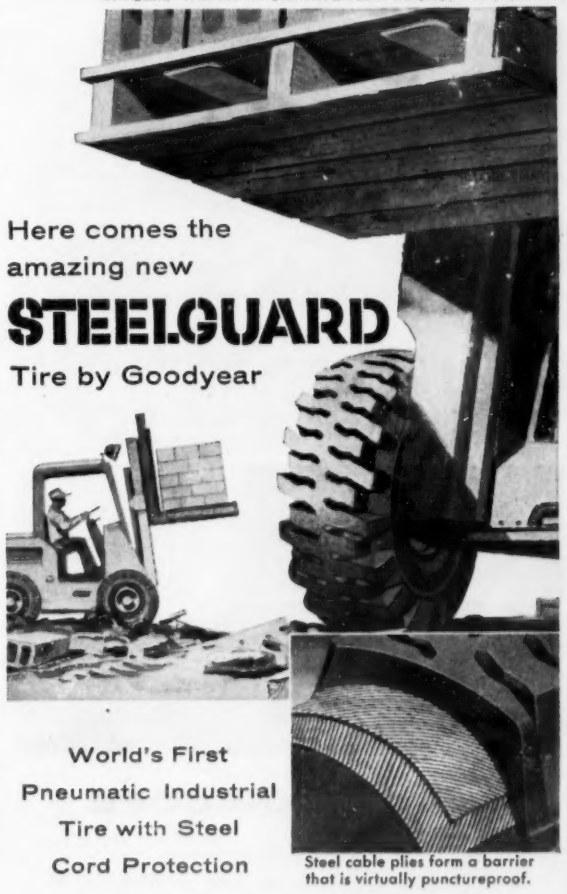
Ranges from 15 p.s.i., or 30" of vacuum, to 20,000 p.s.i.
Bourdon tubes of bronze, drawn or bored s/s, and other alloys

YOUR COPY SHOWING NEW GAUGES AND SPEC. DATA NOW AVAILABLE WRITE:

By the makers of dependable Kunkle Valves
KUNKLE VALVE CO. • FT. WAYNE, IND.

▲ For more details circle NED-266 M8 on enclosed inquiry slip ▲

Steelguard—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio



Here comes the amazing new STEELGUARD Tire by Goodyear

World's First Pneumatic Industrial Tire with Steel Cord Protection

Steel cable plies form a barrier that is virtually punctureproof.

Built-in "Steel Barrier" provides unequaled puncture resistance.

Combine the strength of steel with the smooth-riding, sure-tracking characteristics of the finest pneumatic tire ever made—and you have the revolutionary new STEELGUARD Industrial Tire from Goodyear.

Now, regardless of scrap conditions, a pneumatic-tired lift truck can bring the economies of modern materials handling to *any* area of your plant.

The reason: STEELGUARD is virtually punctureproof, thanks to a crisscrossed web of steel cables locked firmly in place by special rubber compounds.

Notice, too, the heavy lugs on this tire—for "plus" protection from snags and cuts. STEELGUARD is even recommended for brickyard use—formerly "sure death" for pneumatics.

Add to this—longer tire life, better sidewall flexing, greater stability, smoothness and flotation.

Get all the facts on STEELGUARD—available now in 6 sizes—from your Goodyear Dealer. Or, write Goodyear, Industrial Tire Sales, Akron 16, Ohio.

Use the Right Tire for the Job—Buy and Specify

GOODYEAR
INDUSTRIAL TIRES

More tons are hauled on Goodyear Truck Tires than on any other kind

▲ For more details circle NED-267 M8 on enclosed inquiry slip ▲

ARCWELD MODELS CE, JE

Two Musts For Accurate

Creep Rupture Testing

Arcweld Model CE Creep Tester

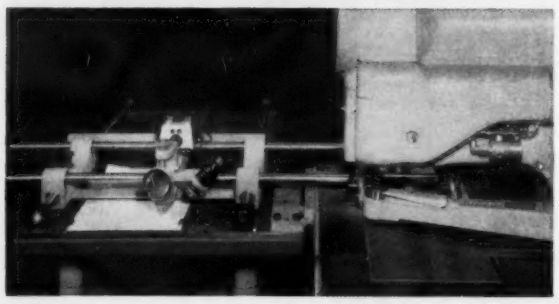
Performance-proved Model CE offers two capacity choices: 12,000 or 20,000 pounds. Occupies only 817 square inches of floor space. Operated by push button electric weight elevator or automatic inch-down. Elevator maintained fraction of inch below weight pan. Prevents shock when specimen breaks. Other features: adjustable counterbalanced lever arm • precision knife edges • substantiated axial alignment • self-aligning, heat-resisting grips • keyed lower extension grip • optical creep measuring equipment.

Compact, economical Model JE was developed for plants with limited floor space. Available in 12,000, or 20,000-pound capacity. All control instruments mounted on single-hinged panel. Automatic creep recording equipment. Precision guided-way drawhead offers ultimate in operating possibilities when specimen must be tested without shock, bending, torsional or cyclic effects, varying load or axiality. Drawhead travel for more than 5 inches also available.

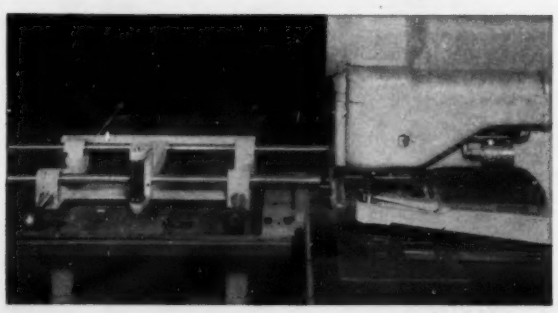
Above machines available with vernier adjustment on lever for ratio calibration. Dual ratio lever system also available at slight additional cost. Write today for more information.

ARCWELD MANUFACTURING COMPANY
P. O. Box 311, Grove City, Pa.

For more details circle NED-268 M8 on enclosed inquiry slip



shortest distance between blueprint and product

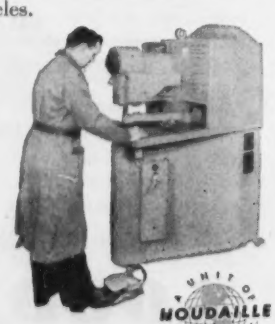


The DUPL-O-SCOPE

Firms punching or notching sheets up to 1/4" mild steel in medium runs know how profitable it is with a Strippit Fabricator-Duplicator. Now, it's even faster with the new Dupl-O-Scope, which eliminates the template drilling and layout step!

Readily mounted in the Duplicator stylus bracket, this precision optical pickup device quickly translates a drawing, layout or printed circuit sample into a punched metal template — ready for rapid-fire punching and notching on the Fabricator-Duplicator.

Write today for catalog and an actual demonstration by a Strippit Mobile Unit. Warehouse stocks at Chicago and Los Angeles.



The versatile Strippit Fabricator for quick-change punching, notching and nibbling — available with positive Duplicator.

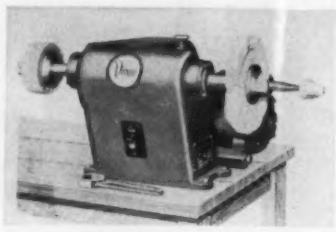
WALES
STRIPPIT
Company
227 Buell Rd., Akron, N. Y.

A UNIT OF HOUDAILLE INDUSTRIES, INC.

In Canada: Strippit Tool & Machine, Ltd., Brampton, Ontario

For more details circle NED-269 M8 on enclosed inquiry slip

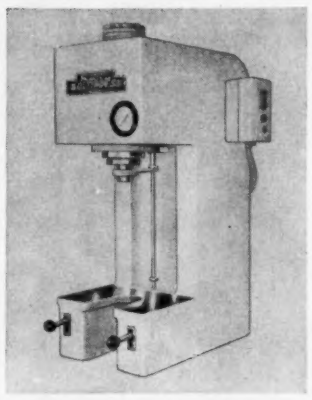
BENCH LATHE
for wheel and belt polishing



Average as well as heavy jobs are handled by the VR bench lathe which can also be used for abrasive belt polishing. Unit will mount either on a bench or on the Divine LP pedestal. Models VR 1, 1½, and 2 have single V-belt drive, whereas Model VR 3 is driven by two V-belts. Speeds of 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3100, 3600, and 4000 rpm can be selected. Two speeds can be selected for the VR 3 in combinations of 1800 and 2400, 1800 and 3000, 2400 and 3000, 2400 and 3600, or 3000 and 3600 rpm. Spindle runs in two sealed, lubricated bearings, and a handwheel controls V-belt tension. Made by **Divine Brothers Co.**, 200 Seward Ave., Utica 1, N. Y.

For more details circle NED-270 M8 on enclosed inquiry slip

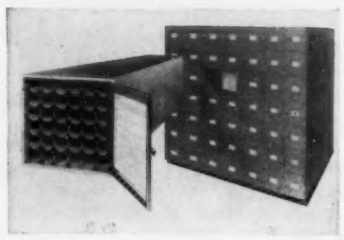
BENCH PRESSES
C-frame type in 2-8 ton capacities



C-frame design Series E Multipresses in 2 to 8-ton capacities are intended to replace heavier, out-moded floor type presses for assembly, crimping, forming, broaching, trimming, and similar operations. Presses operate on 220 or 440 v, 60-cycle, three-phase current. Hydraulic system is a single power unit that can be replaced in a few minutes. Infinitely variable ram force ranges from 400 to 16,000 lb depending on the model. Features include accurate duplication of ram pressure, precision ram alignment, and easy set-up. Presses are designed for manual or automatic production using index tables, feed hoppers, stock feeds, and similar accessories. Made by **American Brake Shoe Co.**, Denison Engineering Div., 1160 Dublin Rd., Columbus 16, Ohio.

For more details circle NED-271 M8 on enclosed inquiry slip

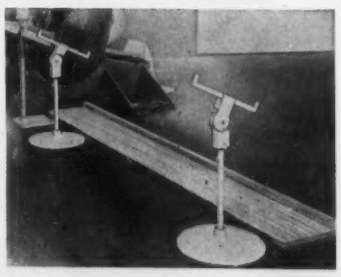
BLUEPRINT & CHART FILE
roll type offered in four lengths



Staktube roll file for blueprints, charts, drawings, maps, and tracings consists of a steel casing which holds thirty-six 2¼-in. diameter file tubes. The square unit has an index record of contents on the inside of the door and a label holder on the outside. Units may be placed horizontally stacked to any height, or stood on end. Lengths to accommodate 30, 36, 42, and 60-in. long tubes are available. Finish is gray baked enamel. Made by **Stacor Equipment Co.**, 295 Emmet St., Newark 5, N. J.

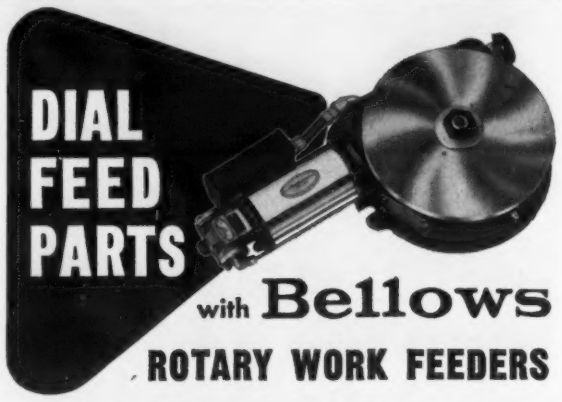
For more details circle NED-272 M8 on enclosed inquiry slip

STOCK SUPPORTING STAND
adjustable in height and incline



Adjustable and portable Type AS metal stock stands are designed to hold a customer-built wood tray for supporting strip stock being fed into a stamping machine. Each stand is adjustable in height from 28 to 42 in. and is inclinable to any desired angle. Stock may be lubricated between the stands and the machine. Brackets on the stand hold a wood tray made from 1 x 6-in. tongue-and-groove lumber. Two stands will support up to 1000 lb. Stands may also be used in portable conveyor systems and as supports for tables or benches. Made by **Stamping Specialty Co.**, 2141 N. Sherman Dr., Indianapolis 18, Ind.

For more details circle NED-273 M8 on enclosed inquiry slip



With Bellows Rotary Work Feeders you can load at one station, unload at another while work is done at a third station. Fast, accurate, locked positioning. Air-powered, electrically controlled. 10" and 22" diameter table tops.

Write for Bulletins RT-1022A and RT-1326A describing Bellows Rotary Work Feeders and Index Tables. Free on request. Address Dept. NED 1258

1012-B

The Bellows Co.
DIVISION INTERNATIONAL BASIC ECONOMY CORPORATION
AKRON 9, OHIO

For more details circle NED-274 M8 on enclosed inquiry slip

PROTECT YOUR SMALL MOTORS

A-B QUALITY

The reliable overload breaker on this Bulletin 600 Starting Switch automatically opens the switch on dangerous overloads. Maintenance free, double break, silver alloy contacts need no maintenance. For a-c and d-c motors to 1 hp.

Allen-Bradley Co.
1334 S. Second St.
Milwaukee 4, Wis.
In Canada—
Allen-Bradley Canada Ltd.
Galt, Ont.

ALLEN-BRADLEY
MOTOR CONTROL
QUALITY

For more details circle NED-275 M8 on enclosed inquiry slip

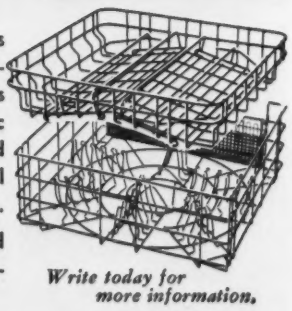
Formed Wire Products

ALL SIZES, SHAPES AND WEIGHTS

FLAT OR ROUND WIRE TO ½" DIAMETER

Made to your specifications in production quantities. Resistance welded at all points of contact. Available in zinc plate with zinc chromate and lacquer or dipped polyvinyl to your color specifications.

Fast, efficient delivery geared with your production schedules.

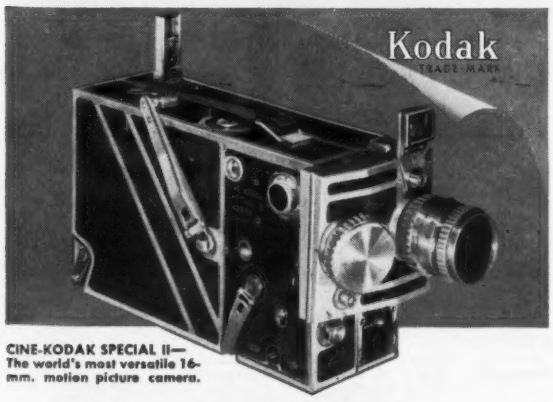


Write today for more information.

Peerless FORMED WIRE PRODUCTS

PEERLESS WIRE GOODS COMPANY, INC.
2706 FERRY STREET · LAFAYETTE, INDIANA

For more details circle NED-276 M8 on enclosed inquiry slip



CINE-KODAK SPECIAL II—
The world's most versatile 16-mm. motion picture camera.

Make movies that work for you!

In almost every industrial activity—engineering, manufacturing, employee training, research, safety and methods evaluation—in-plant movies are the fastest, easiest, and most effective method for putting across your story.

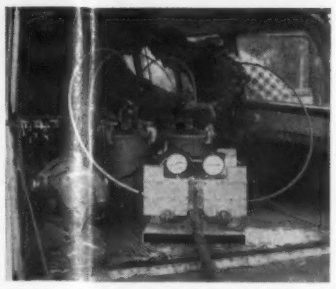
And for on-the-job movie making, many leading industrial companies have chosen the Cine-Kodak Special II Camera. It has the versatility to handle almost any type of job. Yet its simplicity of operation enables you to get high-caliber results almost as easily as taking home movies.

WRITE FOR FREE BOOKLET, V1-3, describing the Cine-Kodak Special II.

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

For more details circle NED-277 M8 on enclosed inquiry slip

EPOXY SPRAY OUTFIT
mixes, applies fast-curing resins delivered through a heated hose



Economical spraying of epoxy coatings is possible with this spray gun which combines the epoxy resins and the hardener only an instant before the mixture is hydraulically atomized and sprayed. This system overcomes the applications restrictions caused by short pot life of the fast-curing catalyzed systems. (*The process and its application were described in NED-966, Nov. '56.*) The gun mixes the resins and hardener, then forces them through its orifice at 300 psi with a minimum of overspray and misting.

The gun is self-cleaning and always ready for use, even after standing overnight. The proportioning machine used with the gun automatically supplies heat-controlled resinous components at the proper pressure and in predetermined proportion. Operation is on 115 v ac. It is furnished with 25 ft of heating hose, to which additional lengths can be added. Made by **A. Gusmer, Inc.**, Prospect Avenue, Woodbridge, N. J.

For more details circle NED-280 M8 on enclosed inquiry slip

BASSICK "61"

STRENGTH + SAVINGS

1. Savings! Both in original cost and in terms of service.

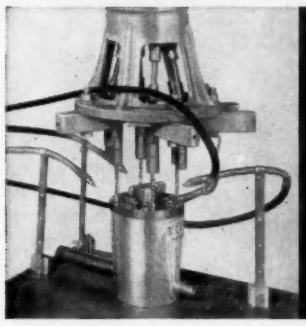
2. Strength! Heavy steel horn and plate. Hardened balls on curved bearing surface. Short, heavy-center king pin.

Many uses . . . on platform trucks, canvas baskets, warehouse dollies, portable bins, etc. Loads from 65 to 500 lbs. each. THE BASSICK COMPANY, Bridgeport 5, Conn. *In Canada:* Belleville, Ont.

Symbol of SW Excellence — Bassick — A DIVISION OF STEWART-WARNER CORPORATION

For more details circle NED-283 M8 on enclosed inquiry slip

Whatever your dry machining process



Economical KETT "Mystic-Lube" Mist Coolant Generator

GIVES YOU . . .

- Faster Operating Speeds
- Longer Tool Life
- Deeper Cuts
- Better Finishes
- Lower Costs
- Flexibility
- Portability
- Dependability

Mist dissipates in the air—cools by refrigeration principle. No special coolants, no moving parts—operates off any air line. Compact, all-in-one unit, one and four gallon size, has features non-available in many higher priced models. Quality designed for quick transfer, ease of maintenance.

KETT — WRITE FOR LITERATURE AND PRICE LIST — THE KETT TOOL CO. — 5051 Madison Rd. Cincinnati 27, Ohio

For more details circle NED-278 M8 on enclosed inquiry slip

ZIPPERED TARPAULIN
panels are zipped together to create any size cover needed

Any size tarpaulin for a particular covering or shielding need can be created with Zipptarp which consists of panels of varying sizes and materials which are zipped together by means of a plastic zipper track. Covering jobs are simplified since a large, heavy cover need not be handled all in one piece. After tarp is lashed down, any panel can be unzipped to allow access to any work point, or to remove desired objects.

Zipptarp is made in lightweight polyethylene or polyethylene-coated paper or cotton, in medium weight waterproofed canvas, and a vinyl-coated nylon for heavy duty applications. Lightweight panels are offered in 5, 10, and 20-ft widths; the medium line in 3, 6, and 12-ft widths; and the heavy line in 4, 8, and 12-ft widths. Standard lengths are 12, 20, and 50 ft, or in continuous lengths of any size. A 1-in. panel with grommets on one side and zipper on the other is also offered for tying down the tarp. Made by **W. A. Plummer Mfg. Co.**, 752 S. San Pedro St., Los Angeles 14, Calif.

For more details circle NED-281 M8 on enclosed inquiry slip

Ruggedly built for tough in-plant loads

Salem-Brosius' Phillips-designed heavy-duty trailers are built to take a beating. They are designed to safely and economically haul forgings, castings, ingots, slabs, plate, coils and other products requiring in-plant handling.

Designed in load-handling capacities from 6000 to 600,000 lbs, Phillips trailers feature front and rear axle fifth wheels for better steering, articulated axles, Timken wheel bearings, solid or pneumatic tires, and 4, 8, or 16-wheel models. They may be used singly or in trains. Write for further information.

Ask about rugged Phil-Dumps. They dump automatically, stack, and handle easily with lift truck.

Phil-Boxes are excellent for carrying and storing heavy materials. They stack and easily collapse.

SALEM-BROSIUS, INC.
16 Arch Street • Carnegie, Pa.

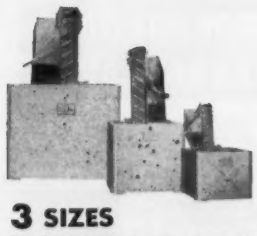
PHILLIPS MATERIALS-HANDLING EQUIPMENT

For more details circle NED-282 M8 on enclosed inquiry slip

NEW! NEW! ELEVATING FEEDER

Offering Many Advantages Including:

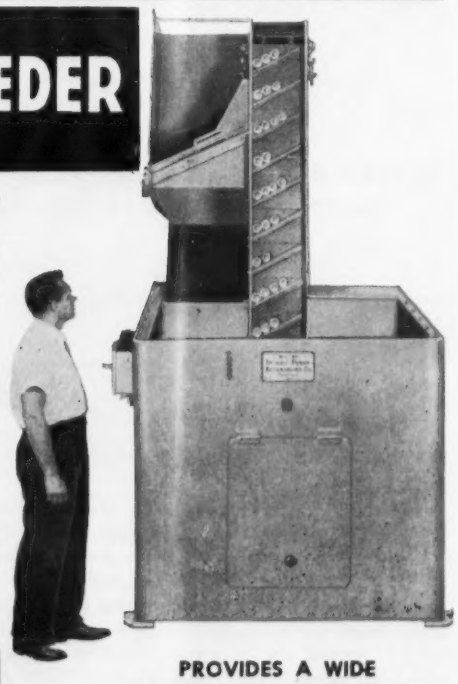
- FLOOR LOADING
- BULK STORAGE
- PARTS ELEVATION
- ORIENTATION
- HIGH FEED RATE
- MINIMIZED RELOADING



3 SIZES
(20-12-6 cubic feet load capacities)
FOR BOTH LARGE AND SMALL PIECE PARTS

These elevating feeders were developed as a supplement to our existing barrel and bowl feeder lines, keeping in mind the industrial demand for a low-cost, high volume capacity floor load parts feeder. They were designed to feed Presses, Hammers, Grinders, Secondary Machines, Furnaces, Assembly Machines—to mention only a few of their many uses. They represent an outgrowth of D.P.S. long, specialized experience in meeting and solving innumerable feeding problems.

Get full particulars NOW! Write Today.



PROVIDES A WIDE VARIETY OF APPLICATIONS TO A LARGE SEGMENT OF INDUSTRY

DETROIT POWER SCREWDRIVER CO.
SUBSIDIARY OF LINK-BELT CO.
2819 W. FORT ST., DETROIT 16, MICH. • *Tel: TA. 5-3070*

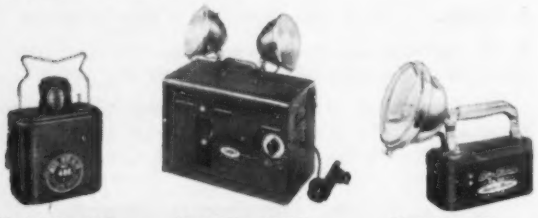
For more details circle NED-279 M8 on enclosed inquiry slip

Big Beam
EXPLOSION-PROOF
ELECTRIC HAND LANTERN

for SAFE LIGHT in HAZARDOUS LOCATIONS

The Model 287EX with powerful 1500-foot beam is designed for use in Class I, Group D Hazardous Locations Approved by Underwriters' Laboratories . . . (atmospheres containing gasoline, hexane, naphtha, benzine, butane, propane, alcohols, acetone, benzol, lacquer solvent or vapors, or natural gases). Also complies with U. S. Coast Guard regulations for use on tank vessels.

Spring ejection bulb prevents possibility of afterglow of filament in case of accident. Features: sparkproof, lacquered brass container and head, lead seals on container latch and rim screw, flexible brass tubing sheathed wire, pressure-type battery connectors. Other BIG BEAM Models:



Model No. 408F Flare and Lantern — Model No. 2ATW Automatic Emergency Light — Model No. 166 with Sealed Beam Bulb

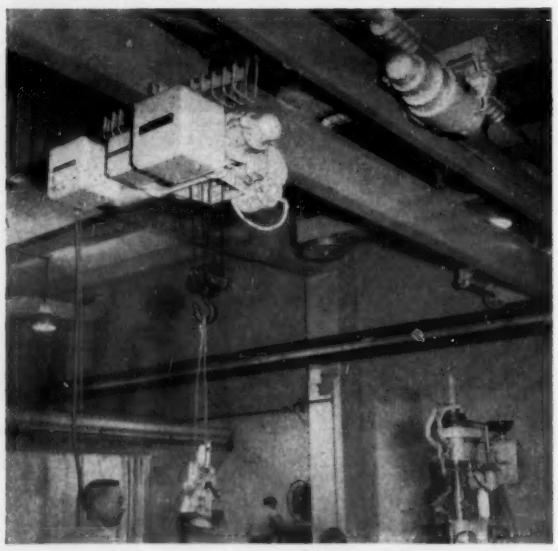
Write for Complete Information 6997

U-C-LITE Manufacturing Co. 1073 W. Hubbard St. Chicago 22, Illinois

For more details circle NED-284 M8 on enclosed inquiry slip

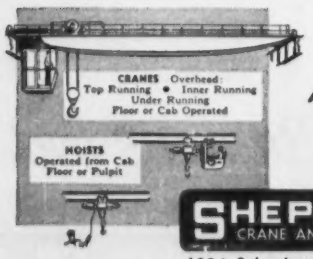
SHEPARD NILES HOISTS

YEARS OF SERVICE with TROUBLE-FREE PERFORMANCE



You can be certain of years of thrifty, dependable service when you invest in a Shepard Niles hoist. Long after you have written off the original cost, your Shepard Niles hoist will still be speeding raw materials and work-in-process through the air.

Choose from medium and heavy duty capacities with slow, medium or fast speeds . . . built for cycle duty, heavy intermittent duty, medium duty and light occasional service . . . available with short to long lifts, standard or close headroom, manual or magnetic controls. Send for illustrated Hoist bulletin today . . . or ask that a Shepard Niles representative call—there's NO OBLIGATION.

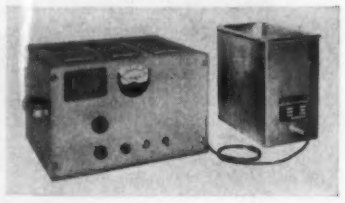


America's Most Complete Line of Cranes and Hoists Since 1903

SHEPARD NILES CRANE AND HOIST CORPORATION
1894 Schuyler Ave., Montour Falls, N. Y.

For more details circle NED-285 M8 on enclosed inquiry slip

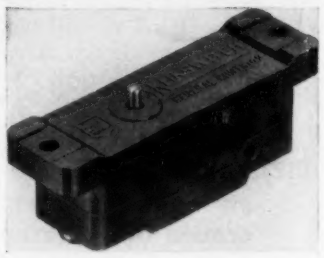
ULTRASONIC CLEANER allows use of two cleaning tanks



Small parts cleaning, blind hole washing, radioactive decontamination, and cleaning of printed circuits and precision parts are typical applications for this low frequency ultrasonic cleaner. Standard unit consists of an electronic generator which delivers 60-w average and 240-w peak energy to crystal transducers mounted on a 1-gal stainless steel tank. Two tanks can be used alternately with the generator without disconnecting either one. Thus, one tank can be used for removing large amounts of soil and the other can be used for final cleaning. List price is $350 with one cleaning tank. Made by **Alcar Instruments, Inc.**, 17 Industrial Ave., Little Ferry, N. J.

For more details circle NED-286 M8 on enclosed inquiry slip

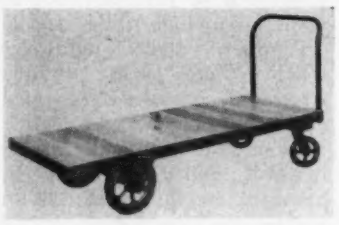
MINIATURE SWITCH mounts various actuating mechanisms



Rigid back-of-panel mounting in fixed relation to the actuating mechanisms is provided by integrally molded mounting ears on the basic Klikswitch. Side mounting holes permit use of the ears for attaching various forms of actuating mechanisms. The snap-action switch mechanism is encased in molded phenolic. The single-pole double-throw or single-pole single-throw normally-closed contacts are rated 8 amp at 115 v ac, noninductive. Operation requires 14.26-oz force and release occurs automatically when force is reduced to 6.34 oz. Manual release is also available. Height is 2.187 in., and width is 0.688 in. Made by **General Controls Co.**, Automation Div., 8066 McCormick Blvd., Skokie, Ill.

For more details circle NED-287 M8 on enclosed inquiry slip

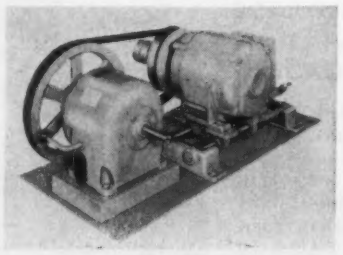
FLAT BED HAND TRUCKS offered in various sizes, capacities



Moldon rubber, plastic, and semisteel wheels with roller bearings are offered on 1300 Series general purpose flat bed hand trucks. All models have a hardwood deck set in an angle-iron frame and a tubular steel push handle located on the caster end. The 2000-lb capacity truck models have 10 x 2-in. load wheels and 6 x 2-in. casters. Deck height is 13 in. The 3000-lb capacity models have 12 x 2¼-in. load wheels and 8 x 2-in. casters. Deck height is 14 in. Both capacities are available with 2 x 4, 2½ x 5, 3 x 5, 2½ x 6, and 3 x 6-ft deck sizes. Made by **Lansing Co.**, 521 N. Cedar, Lansing, Mich.

For more details circle NED-288 M8 on enclosed inquiry slip

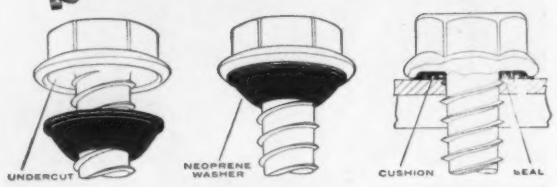
VARIABLE SPEED DRIVE made in ½ to 7½-hp ratings



Available in ½, ¾, 1, 1½, 2, 3, 5, and 7½-hp ratings, this infinitely variable speed drive is well suited to power cutoff saws, welding positioners, polishers, grinders, machine tools, conveyors, pumps, metal formers, and tumbling barrels. It consists of a standard 1800 rpm motor with a shaft-mounted self-adjusting variable pitch pulley belted to a companion pulley on a four-speed transmission. Motor and transmission combinations provide speed variations from 12:1 to 25.7:1. Maximum and minimum output speeds are obtained when motor is moved toward or away from driven machine by turning handwheel on adjustable motor base. Infinite speed between extremes are obtained by shifting the gearshift drive and turning the handwheel. Made by **Lima Electric Motor Co.**, Dept. 124, Lima, Ohio.

For more details circle NED-289 M8 on enclosed inquiry slip

For better products
LEAKPROOF...CUSHIONED
TUFF-TITE FASTENERS



Undercut of Tuff-Tite fastener head . . . — . . . confines and controls flow of conical neoprene washer — . . . so washer seals the hole and cushions the fastener head!

Now you can • prevent leaks at fastener holes • protect fine finishes from fastener damage • stop vibration noises and squeaks

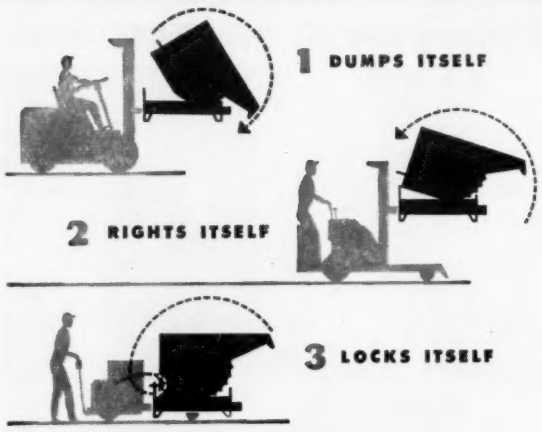
Leakproof, non-marring, shock and squeak absorbing! If you need these fastening advantages, you need National Tuff-Tite fasteners.

Standard National Tuff-Tite fasteners are available in hexagonal, pan, round and truss head styles for screw diameters No. 6 to ⅜" inclusive . . . maximum over-all length 1½". Standard fastener types are wood screws, self-tapping screws, thread cutting screws, machine screws and stove bolts. Tuff-Tite fasteners are pre-assembled with neoprene washers.

Washers are molded of neoprene which has a durometer hardness of 85 to 95. *Write for the Tuff-Tite fastener folder describing this line in detail.*

THE NATIONAL SCREW & MFG. COMPANY
CLEVELAND 4, OHIO
Pacific Coast: National Screw & Mfg. Co. of Cal.
3423 South Garfield Ave., Los Angeles 22, Cal.

For more details circle NED-290 M8 on enclosed inquiry slip

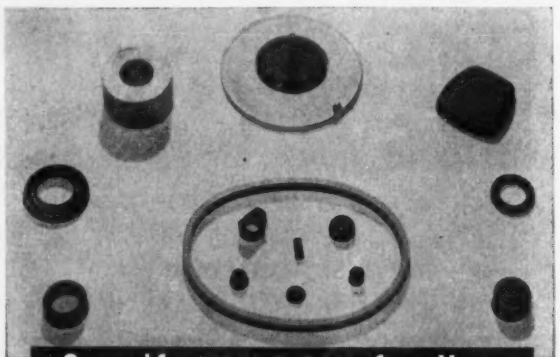


Cuts handling time...and costs...50%

Here's the fastest, lowest cost method ever devised for handling hot or cold, wet or dry bulk materials . . . scrap metal, hot forgings, cinders, soybean meal, etc. Fits any standard lift truck. One man picks up loaded Hopper with truck, transports it to destination, and flips the latch. The Hopper automatically dumps its load, rights itself, locks itself. Cuts costs 50%. Made of 3/16" steel plate with continuous arc-welded seams. Also in stainless steel or galvanized. Five sizes, ½ to 2 cubic yards. Standard models can be shipped from stock immediately. Literature and other information available on request. ROURA IRON WORKS, INC., 1415 Woodland Ave., Detroit 11, Mich.

ROURA *Self-Dumping* **HOPPER**

For more details circle NED-291 M8 on enclosed inquiry slip



Specify WILBOW for Your SILICONE Rubber Parts

WILBOW silicone rubber parts have many desirable characteristics in addition to excellent stability under temperature extremes (−125° to +600° F). Silicone may be the answer to your problem if your parts require low compression-set, good dielectric properties, resistance to ageing, sunlight or ozone, exceptional release from sticking or other characteristics not commonly found in natural rubber or other synthetics.

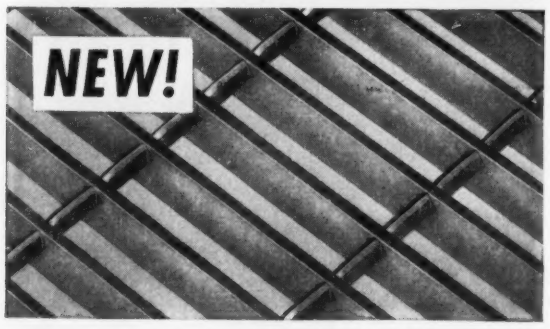
We are well experienced in producing silicone parts by techniques such as molding, extruding, calendering, bonding or punching from sheet. Let us know of your requirements.

Send for **New WILBOW Catalog** *It will become your handbook of rubber goods*

Wilbow

The WILLIAMS-BOWMAN RUBBER Co.
1954 South 54th Avenue • Cicero 50, Illinois
Mfrs. of molded, punched, extruded and cut rubber goods. Specialists in producing rubber covered rolls, silicone rubber parts and bonding rubber to metal

For more details circle NED-292 M8 on enclosed inquiry slip



Gary Galok* SUPER ALUMINUM GRATING

First improvement in rectangular mesh grating in over a quarter-century!

- High strength-to-weight ratio.
- Cross bars can't turn, come loose or fall out.
- All sizes—3/4" x 1/8" to 2 1/4" x 3/16".
- Standard mesh with main bars on 1-3/16" centers and close mesh with main bars on .915 centers with cross bars on 4" or 2" centers.
- Safe, slip-proof surface.
- Available in plain or serrated main bars.

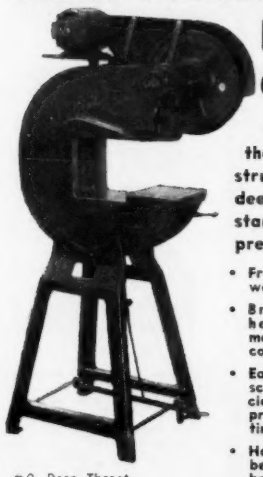
You'll want full details about this new aluminum grating Write for Bulletin N-128.

*Patents Pending

ROCKWELL-STANDARD CORPORATION
GRATING DIVISION
4045 E. Seventh Ave., Gary, Indiana

For more details circle NED-293 M8 on enclosed inquiry slip

NEW... deep throat, 5 Ton PRESS-RITE O.B.I. PRESS



#0, Deep Throat PRESS-RITE O. B. I. Power Press

FULL 12" THROAT DEPTH plus the usual rugged PRESS-RITE construction gives you an outstanding deep throat O.B.I. press. Some of the standard PRESS-RITE features of this press are:

- Frame heavy steel weldment.
- Bronze-bushed heavy flywheel, main bearings and connecting rod.
- Easy adjusting ball screw and locking clamp for faster precision die setting.
- Half Vee front ram bearings, flat rear bearings, with easily replaceable strips.
- Standard brake and clutch.
- Single stroke attachment.
- Knockout bar in ram.
- Depth of Throat—12 inches.
- Shut height 6", Standard stroke 1 1/4".
- Flywheel Speed—225 S.P.M.
- Available in floor or bench models.

For complete information on the #0, Deep Throat PRESS-RITE Press ask your PRESS-RITE Distributor or write direct. PRESS-RITE Presses are available from 2 Tons to 85 Tons.

PRESS-RITE DIVISION

Sales Service Mfg. Co.

2365 University Ave., St. Paul 14A, Minnesota

For more details circle NED-294 M8 on enclosed inquiry slip

TRANSFER FILES
two hand holes ease handling

Hand hole added to rear of drawers of Convoy transfer or storage files facilitates handling of loaded drawers. Files are available in 15 sizes, including letter, legal, check, and tab card. They are made of Chem-Board, a heavy duty corrugated board which is chemically impregnated to rock-hard strength, and they have a smooth exterior which is impervious to moisture. Made by **Convoy, Inc.**, 3424 Navarre Rd. S.W., Canton 6, Ohio.

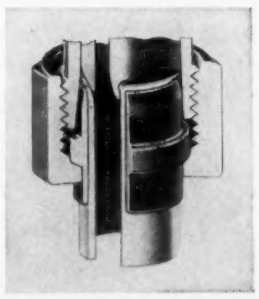
For more details circle NED-296 M8 on enclosed inquiry slip

AIR FILTER GAGES
indicate need for change, cleaning

Position of white ball in transparent plastic tube of this sensitive air filter gage indicates whether filter is operating properly or needs to be replaced or cleaned. It indicates the pressure drop through the filter. Two models are available with pressure ranges of 0.04 to 0.15 in. and 0.15 to 1-in. water column. They are adjustable within each range. Gages can be used in electronic equipment cooling systems, air conditioners, and ventilating systems. Made by **Henry G. Dietz Co.**, 12-16 Astoria Blvd., Long Island City 2, N. Y.

For more details circle NED-297 M8 on enclosed inquiry slip

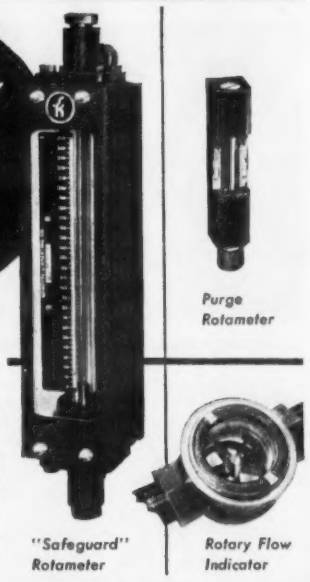
TUBE FITTING
is of self-flaring design



Available in sizes and various styles to fit standard tubes from 1/8 to 2 in., this self-flaring tube fitting assures leakproof connections. Hardened steel sleeve presses the tube into the contoured body to form a flare as the fitting is tightened. A pressure-tight seal is formed on inside and outside of tube, and a slotted skirt on rear of sleeve supports the tube and absorbs vibration. Offered in steel, stainless steel, brass, and aluminum, reusable fitting is made by **Flodar Corp.**, 16911 St. Clair Ave., Cleveland 10, Ohio.

For more details circle NED-298 M8 on enclosed inquiry slip

FAST DELIVERY on Rotameters and Flow Indicators



SK makes a complete line of Rotameters and Flow Indicators. For quick delivery the company stocks popular types and sizes. If you need action fast, contact us stating your requirements. We'll let you know if a stock item is available and, if not, what we can do to expedite delivery. Call us at Cornwells Heights, Bucks County, Pa., "MErcury 9-0900" or contact us by TWX, "Cornwells, Pa., 69." Ask for the INSTRUMENT DIVISION.

SK's complete line of Rotameters for accurately measuring fluid rate of flow and Flow Indicators for indicating flow are briefly described in Bulletin M-1. Write for your copy.

Schutte and Koerting COMPANY
INSTRUMENT DIVISION
2227 STATE ROAD, CORNWELLS HEIGHTS, BUCKS COUNTY, PA.

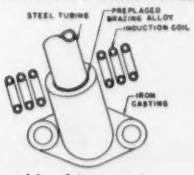
For more details circle NED-299 M8 on enclosed inquiry slip

The Lepel line of induction heating equipment represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating.

If you are interested in induction heating you are invited to send samples of the work with specifications. Our engineers will process and return the completed job with full data and recommendations without any cost or obligations.

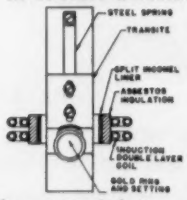
TYPICAL INDUCTION HEATING APPLICATIONS

IRON CASTINGS BRAZED TO STEEL TUBES



Assembly of iron castings and steel or copper parts are facilitated by induction heating. Arrangement is illustrated for silver brazing malleable iron castings to steel tubing. Coil design shown provides uniform heating for joint. Proper joint design assures high bond strength. Electrolytic treatment of castings to remove carbon (Kolene Treatment) increases strength and tightness of joint to gases and liquids.

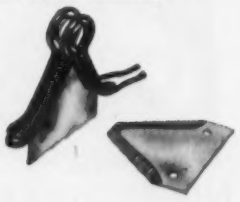
GOLD BRAZING IN JEWELRY INDUSTRY



Liner type induction coil provides a flexible arrangement for brazing settings to gold rings. The simple fixture facilitates handling. The unique coil design permits heating by induction and by radiation from heated metal liner. Ring, setting and gold brazing alloy are pre-assembled in a ceramic jig and then moved into heating position within the coil for brazing.

CUTTER BLADES SELECTIVELY HARDENED

Photo shows coil design and arrangement used to selectively harden edges of cutter blades used in agricultural equipment. In production, cutter blades are automatically fed between layers of the induction coil, selectively heated and then oil quenched at the rate of one per second. Hardness at the cutting edge is Rc 62/64. Distortion is negligible.



Electronic Tube Generators from 1 kw to 100 kw.
Spark Gap Converters from 2 kw to 30 kw.

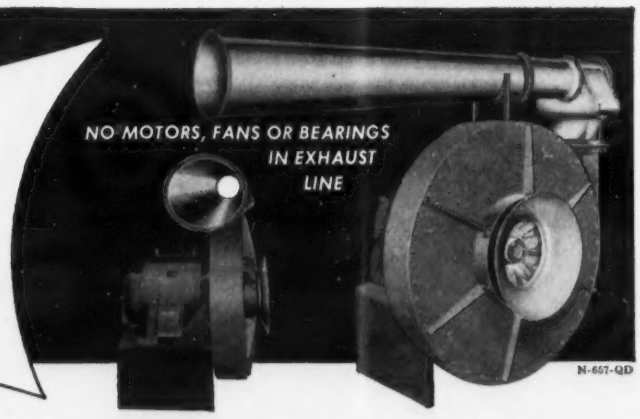
WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information.

All Lepel equipment is certified to comply with the requirements of the Federal Communications Commission.

LEPEL HIGH FREQUENCY LABORATORIES, INC.
55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

For more details circle NED-300 M8 on enclosed inquiry slip

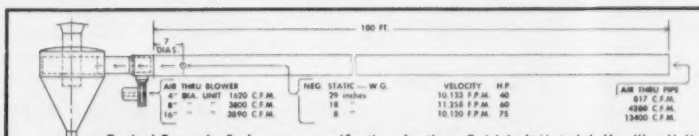
Now... you can reduce bulk materials handling costs with Quickdraft high pressure exhausters



FOR MOVING:
Cement, Sand, Iron Oxide, Wheat, Corn, Salt, Limestone, Castor Beans, Knots, Blocks, Paper, Wool, Cotton, Oats, Rags, Rubber, Vegetables, Coal (Powdered), Shavings, Cork, Sawdust . . . **and any other materials that can be moved by air!**

IMPORTANT NOTICE
For resisting abrasive action, Quickdraft units can be rubber lined. For withstanding corrosive gases, all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (PVC), and with plastic and Fiberglas coatings.

Time and maintenance savings usually pay for Quickdraft high-pressure exhausters in 6 to 18 months on materials handling jobs. Because material does not pass through blower, maintenance is negligible. Downtime for cleaning and replacing fans, motors and bearings is eliminated. Quickdraft units are also ideal for exhausting paint spray, abrasives, corrosive gases, noxious fumes and high temperatures. For Quickdraft engineering data on materials handling, industrial exhausting, heating plant venting, write today!



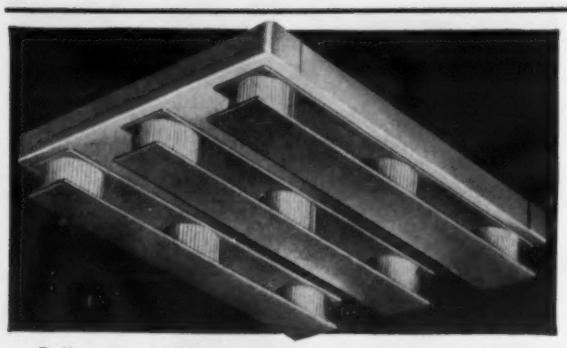
Patent Nos. 2,722,372 and 2,855,874. Other Patents Pending.

Typical Example: Performance specifications for three Quickdraft Materials Handling Units using same size blower, pulling through 100 ft. of pipe the same diameter as Quickdraft. (Models range from 4 in. to 30 in. diameter—with 1/6 to 600 H.P. motors—with negative static pressures from 1/4 in. to 60 in. W.G.)

Quickdraft corporation
P.O. Box 87-L • Canton 1, Ohio

Well known for power draft units for all types of heating plants.

For more details circle NED-295 M8 on enclosed inquiry slip



Bottom view of Signode pallet showing paperboard posts

Weighs 10 pounds...supports 6000

Low cost Signode expendable pallets are low in first cost; eliminate all maintenance cost, save storage space.

Light weight Cut shipping costs every mile, every load. Easy and clean to handle.

Strong Rugged construction proved in use and in famous Signode testing laboratory.

Versatile Standard or special sizes. Post placement variable. Tray or flat tops.

Expendable No returns, therefore no shipping, record-keeping or storage costs on returns.

Assistance on expendable pallet design and unitizing methods is available from a local Signode Pallet Licensee. Write Signode.

Sponsored by Paperboard Pallet Manufacturers

in cooperation with

SIGNODE STEEL STRAPPING CO.

Dept. SP, 2643 N. Western Avenue, Chicago 47, Ill.

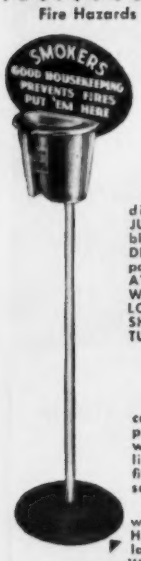
For more details circle NED-301 M8 on enclosed inquiry slip

CIGARS-CIGARETTES-MATCHES

immediately extinguished ...with SIPCO DUNKING STATIONS

Fire Hazards from Smoking are a problem EVERYWHERE.

STOP FIRES BEFORE THEY START—with SIPCO DUNKING STATIONS.



Heavy duty CAST ALUMINUM canisters—guaranteed 3 years against breakage. Partly filled with water, they drown the "smoke". NO FIRE HAZARDS — NO ODORS — NO UNSANITARY CONDITION.

Lift off the canister, flip back the lid, dump it and the cleaning job is done.

Available in over a dozen different STANDARD and JUMBO SIZE models. Choice of black crinkle or bright polished DELUXE finishes to suit your particular requirements. NEAT, ATTRACTIVE — USED EVERYWHERE — OFFICES, CLUBS, LOUNGES, HOSPITALS, HOTELS, SHOPS, RESTAURANTS, INSTITUTIONS, SCHOOLS, ETC.

NEW MODEL 4J

Designed for permanent mounting on walls, posts, columns, etc. in public areas. Eliminates pilfering problem. JUMBO size canister furnished with light weight, rugged glass-fiber inner-liner. Flip back the lid—lift out the inner-liner and dump it. Inner-liner fits all JUMBO size SIPCO canisters and is available separately.

MODEL 1JD

JUMBO size DELUXE FLOOR MODEL. Heavy weighted base and attractive, eye catching sign. Height 42"—weight 26 lbs. Ideal for halls, aisles, landings, etc. Also available less sign (MODEL 1JWS). WRITE FOR ILLUSTRATED BROCHURE.

STANDARD INDUSTRIAL PRODUCTS CO.

DEPT. D • 3527 FARMINGTON RD. • PEORIA, ILLINOIS

For more details circle NED-302 M8 on enclosed inquiry slip

LOW COST INCINERATOR

BURNS TRASH SAFELY OUTDOORS

Only $110.00 COMPLETE

NO INSTALLATION COST

Burn wrappings, sweepings, papers, cartons, packing, rags, food waste, safely outdoors. Scientific draft control ends fire hazards of flying ash, sparks, burning blowing papers. Burns damp, green, or dry refuse to fine ash in any weather. Minimizes smoke and smell, needs no watching. Safe for use 10' from buildings. Stands 52" high x 35" square at base. 10 bushel burning capacity. Complete with hinged hood, ash pan base and grate and cleanout door. Made of aluminized steel (molten aluminum bonded to steel) with replaceable inner steel panel construction for long life. Shipped assembled—weight 170 lbs. Only $110.00 F.O.B. Cleveland. Satisfaction guaranteed. Other sizes available.

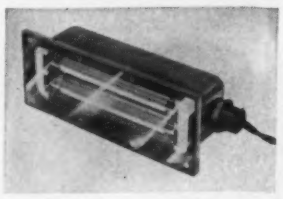
Write for **FREE** *Folder*

ALSTO COMPANY

Dept. NE-12 4007 Detroit Ave. Cleveland 13, Ohio

For more details circle NED-303 M8 on enclosed inquiry slip

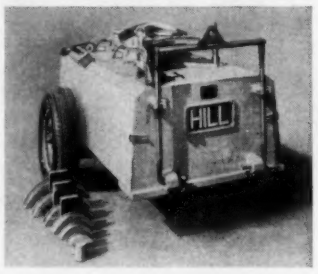
MACHINE LIGHT
fluorescent unit is splashproof



Two 4-w fluorescent lamps and a ballast in the sealed reflector of the No. EL237 machine light provide up to 500 ft-c at a 3-in. distance for close precision inspection or production work. The splash-proof unit is used where moisture, coolants, dirt, and chips make other lights inadequate. A built-in clear plastic shield prevents entry of foreign materials. Low fluorescent operating temperature eliminates the hazard of accidental burns and operator discomfort. Fixture is fitted with a ½-in. straight pipe thread for permanent mounting on machine or bench and can be fitted with a remote on-off switch. Made by **Stocker & Yale, Inc.**, Green Street, Marblehead, Mass.

For more details circle NED-304 M8 on enclosed inquiry slip

PIPE BENDER-FABRICATOR
is portable, hydraulic power unit



Usable in all types of production, construction, and maintenance operations, this portable hydraulic bending and fabricating machine is mounted on a pneumatic-tired trailer with a castered front wheel. It can be moved manually or towed by truck. It incorporates a 20-ton ram type hydraulic bender powered by a 2000-psi 5-gpm hydraulic pump and reservoir. Pump is driven by a 220-240-v 5-hp electric motor or an optional 5-hp gasoline engine. It will bend pipe and conduit up to 2¼-in. diameter, 1½-in. diameter round bars, and angle. Adjustable bends with radii five times the diameter of the pipe are formed. Dies for ½ to 2½-in. pipe and a pipe vise are standard equipment. Made by **Walter P. Hill, Inc.**, 22183 Telegraph Rd., Detroit 19, Mich.

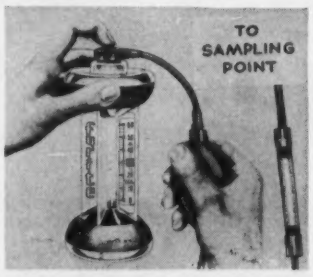
For more details circle NED-305 M8 on enclosed inquiry slip

PNEUMATIC CONVEYOR
portable unit loads and unloads

Chemicals, plastics, foods, feeds, and similar dry, granular, free-flowing materials are handled by the trailer-mounted Pneu-Pac pneumatic conveyor. Capacity of this combination positive and negative pressure in-plant handling system depends on the nature and weight of the material being handled and the combined vertical and horizontal travel distance. The assembly is mounted on a four-wheel trailer, has an over-all height just under 8 ft, and includes a 14 x 10-in. rotary vane air-lock feeder. Made by **Sprout, Waldron & Co.**, 130 Logan St., Muncy, Pa.

For more details circle NED-306 M8 on enclosed inquiry slip

PORTABLE GAS ANALYZER
measures CO_2 at up to 850° F



Expanded line of portable Fyrite gas analyzers includes this unit for measuring 0 to 60 per cent carbon dioxide. This range is particularly suitable for measuring CO_2 in exhaust gases of kilns for cement and allied materials, heat - treating atmospheres, brewing tanks, inert atmospheres maintained in tanks or tanker holds, and protective atmospheres used in many industrial processes. Unit will test gases up to 850° F. It operates on the Orsat method, involving absorption of the gas sample by a chemical absorbent. Gas sampling equipment used to pump atmosphere sample into the instrument is supplied. Readings are not affected by presence of other gases, and accuracy is within ½ of 1 per cent of scale. Made by **Bacharach Industrial Instrument Co.**, 200 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle NED-307 M8 on enclosed inquiry slip

Another NEW Count-Pak

In Veeder-Root's Series of Complete Electronic Counting Packages

- **High Speed**
- **Instant Reset**
- **Completely Transistorized**
- **No Warm-up Needed**
- **Photohead Designed to your Application**

Series 1661 Units are ideal for high-speed direct counting applications, such as can and bottle counting, or case and piece counting on conveyor lines. Unit consists of glow-transfer cold-cathode counting tube and high-speed magnetic counter, coupled with transistorized circuits. Use of an electronic decade increases counter life and assures continuous rugged operation. *Write for specs and prices.*

EVERYONE CAN COUNT ON

VEEDER-ROOT INC.

HARTFORD 2, CONNECTICUT

Hartford, Conn. • Greenville, S. C. • Altoona, Pa. • Chicago
New York • Los Angeles • San Francisco • Montreal
Offices and Agents in Principal Cities

For more details circle NED-308 M8 on enclosed inquiry slip

INSPECTION BY PROJECTION

with the *NEW* **SCHERR MICRO PROJECTOR** with the **VERTICAL DESIGN**

NEW IMPROVED *Self-Contained* MODEL

featuring

Rigid Floor Base — eliminating extra charge for table
Tilting Stage for Helix, Angles and Bevels
4" Dia. Stage Opening
14" Diameter Screen
Column Slide adjustable for wear by means of gibs. Will hold square indefinitely.
Custom made Precision Coated Lenses and double condensers for different objectives 10 to 100X magnification.
Surface Illuminator can be added anytime.
An entirely new practical designed tool for Inspection Department and Production Shop.

BASIC PRICE . . . $450.00

SCHERR PRECISION COMPARATOR CHARTS

OVERLAY and REPLACEMENT STANDARD CHARTS are carried in stock.

SPECIAL CHARTS made up to your specifications.

WRITE FOR ILLUSTRATED FOLDER CODE GIUJY

GEORGE SCHERR CO., Inc.

COMPLETE LINE OF PRECISION INSTRUMENTS

WEST COAST BRANCH: SCHERR-TUMICO CO. - 3337 W. Olympic Blvd. - Los Angeles 19, Cal.

200,-ND LAFAYETTE STREET • NEW YORK 12, N. Y.

For more details circle NED-309 M8 on enclosed inquiry slip

Specify **the Best**

in Engraved Tools

The quality of your product deserves equal quality in your marking.
Our complete inventory of alloy steels permits instant selection to meet your requirements.
Style of lettering is tailored to your job.
Quotations furnished promptly upon request.

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.

1800 W. Belle Plaine Avenue
Chicago 13, Illinois

For more details circle NED-310 M8 on enclosed inquiry slip

low installation cost

New building or old, it costs much less to install Reznor gas unit heaters than any other type of heating equipment. Just move them in, mount them in position, make simple fuel, electrical and vent connections and they're ready to go to work . . . producing and distributing heat right at the point of need.

LOW INSTALLATION COST is just one of many reasons why Reznor heaters are right for so many plant heating jobs. These completely automatic packaged units also offer substantial savings on initial costs and on operating and maintenance expense. Whether you need one heater to eliminate a "trouble" spot or enough units for a complete plant heating system, ask your Reznor distributor for details or write for your free copy of "Modern Heating".

Look for Reznor under "Heaters-Unit" in the Yellow Pages

REZNOR
WORLD'S LARGEST-SELLING DIRECT-FIRED UNIT HEATERS

Reznor Manufacturing Company, 41 Union Street, Mercer, Pa.

For more details circle NED-311 M8 on enclosed inquiry slip

The BECO

Super Lift LEVER DOLLY

- Why Pay More!
- Guaranteed
- Stronger
- Safer

- For immediate shipment, wire phone, or pin this ad to your letterhead and mail to:

BECO - Bettendorf, Iowa

Four Models ● Metal or Rubber Wheels

For more details circle NED-312 M8 on enclosed inquiry slip

SURETY

SURESEAL GOES HAND in GLOVE WITH THE TOUGH JOBS

Your production machinery is an extension of the skilled hands that operate it. Protect those hands with Surety Sureseal gloves.

Sureseal, with exclusive Turn-Cuff, gives maximum security against crippling accidents and skin diseases wherever hands are exposed to chemicals, solvents, oils, etc. Sureseal means savings, too, because production increases and costs drop where injury causes are minimized.

Sureseal, made from Hycar, offers more effective resistance to solvents and other caustic liquids and lasts up to 14 times longer than rubber and other synthetics.

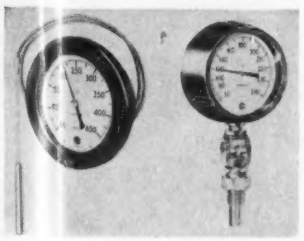
Test Sureseal at our expense. Write us on your letterhead outlining the job requirements and we'll send you a pair of Sureseals by return mail. Dept. N

THE SURETY RUBBER CO. CARROLLTON, OHIO

In Canada: Safety Supply Co., Toronto

For more details circle NED-313 M3 on enclosed inquiry slip

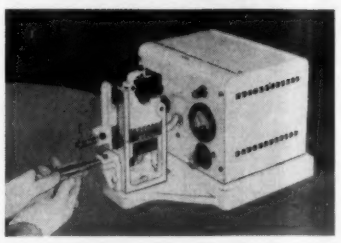
DIAL THERMOMETERS line has −350 to 1000° F range



Variations in redesigned line of indicating dial thermometers include remote or direct reading types; ambient temperature compensation where required; filling mediums for different ranges and uses; various case sizes, materials, and styles; and thermometer bulbs of different sizes, shapes, and materials to suit the application. Ranges covered are −350 to 1000° F. Remote models use armored capillary tubing so that the indicator can be up to 125 ft from the bulb. Rigid stem and multiangle direct-reading styles are offered. Zero setting is by a micrometer adjusting screw. Vapor, gas, mercury, and organic liquid filling mediums are used. Dial sizes are 3½, 4½, 6, and 8½ in. Made by **American Machine & Metals, Inc.**, U. S. Gauge Div., Sellersville, Pa.

For more details circle NED-314 M8 on enclosed inquiry slip

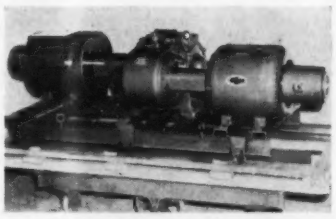
BENCH TYPE WELDER is low-wattage stored-energy unit



Stored energy principle employed in this Model DC 80A bench type Tweezer-Weld unit permits it to weld difficult materials such as copper, silver, and tungsten as well as dissimilar materials of different thicknesses. It incorporates a TW5 friction welding head and an 80 watt-second stored energy panel. A plier type hand piece is available for welding hard-to-get-at assemblies which cannot be handled in the head. Discharge time of 0.0008 to 0.0012 sec insures reliable welds without discoloration, excessive deformation, or metallurgical change. Made by **Federal Tool Engineering Co.**, 1390 Pompton Ave., Cedar Grove, N. J.

For more details circle NED-315 M8 on enclosed inquiry slip

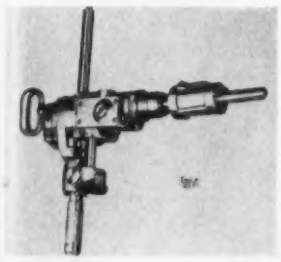
MOTOR-GENERATOR SET 15-kw unit produces 400-cycle ac



Improved motor-generator set shown mounted on welded steel base is rated 15 kw, 0.8 power factor, 115/200 v, three-phase. Left to right are the 400-cycle variable alternator with separate rotating direct-current exciter, totally enclosed speed control, and synchronous motor with exciter. Set produces 400-cycle ac at 1714 rpm with frequency adjustable from 380 to 420 cps as speed is varied by simple hand crank. Drive motor is rated 25 hp, 208/416 v, 1800 rpm. Base rests on six mounting feet equipped with vibration isolators. Flexible couplings are protected with guards. Made by **Kato Engineering Co.**, 1415 First Ave., Mankato, Minn.

For more details circle NED-316 M8 on enclosed inquiry slip

TUBE EXPANDER DRIVES for up to 1½ and 3 in. OD tubes



Added to the Torq-Air-Matic line of automatic tube expander drives are two heavy-duty air-driven models. The 200-rpm Model C shown is rated 75 lb-ft torque and is designed for tubes used in packaged or power plant boilers, waste heat boilers, ammonia condensers, sulphite evaporators, and air-preheaters. It will roll up to 3-in. diameters in ⅝-in. sheet. Model B is offered in three versions, with torques ranging from 38 to 22 lb-ft and speeds from 450 to 750 rpm. It is for ferrous or nonferrous tubes up to 1½ in. OD used in process heat exchangers. Torque output is measured directly at the mandrel by means of an unusual mechanical device. Made by **Thomas C. Wilson, Inc.**, 21-11 44th Ave., Long Island City 1, N. Y.

For more details circle NED-317 M8 on enclosed inquiry slip

A Stockroom You Can Build Yourself!

SECTIONAL STACKBINS® give you the greatest flexibility and ease of installation ever devised for parts, tools, materials storage containers. You can set them up in minutes without tools! By combining bin sizes and number and size of openings, you get a storage system tailored to fit your particular needs. SECTIONAL STACKBINS give you maximum storage utility in minimum space. Available in 6 interstacking sizes.

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1081 Main Street, Pawtucket, R. I.
Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN® SYSTEM "Stacked and Still Accessible"

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Because this has what it takes...

The rugged durability and extra value (Timken tapered roller bearings in every wheel, spring loaded non-kicking handle, slide planes for easy pallet entry and 360° lifting radius as standard) of the REVOLVATOR Red Giant hand lift pallet truck has built a reputation which means that . . .

We were called on to do this...

One of six basic models...REVOLVATOR Series 54.00 Go-Getter for use in explosion hazardous areas for chemical and related companies with Class I Group D or Class II Group G hazards designed at the request of one of the country's leading safety authorities. This electric lift truck meets requirements for both hazards and utilizes screw type housings hydrostatically tested to pressures far beyond those required. Additional safety feature—hydraulically operated disc brake.

Explosion-proof High-lift Go-Getter

Therefore: Whether you need a standard piece of material handling equipment or specially designed equipment, call on

REVOLVATOR CO.
8732 TONNELE AVENUE, NORTH BERGEN, N.J.

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When you "corner" the market
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And when you're in a corner for any type of Armed Forces and Transit Case Hardware as well as Stampings and Stamped Assemblies see

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J. H. SESSIONS & SON
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Cut ANY Shape in Metal...
with a BEVERLY THROATLESS SHEAR!

- Capacities to 3/16" in mild steel
- Make clean, knurl-free cuts in any metal to capacity
- High Carbon High-Chrome Blades
- Built to last a lifetime

Here's What a Beverly Can Do!
Cuts made in 18 ga. metal with Model B-1

Model B-3 with Ball Bearing Hold Down

Beverly Shears are the most versatile metal shearing tools you can use. Unique shoulder design permits any cut . . . rack and pinion gives great power with little effort. Alloy steel body for maximum rigidity and strength. Made in 4 models.

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Beverly SHEAR MFG. CO.
3016 W. 111th Street Chicago 43, Ill.

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TORQUE ACTUATORS

FREE—NEW 20-PAGE BOOK
EVERYTHING YOU'LL WANT TO KNOW ABOUT ROTAC —How It Works • Control • Applications and Special Uses • Installation Details • Complete Dimensions and Torque Ratings • Helpful Ideas on How You Can Use ROTAC in *Your* Operation.

EX-CELL-O CORPORATION
XLO 58-28
EX-CELL-O FOR PRECISION
GREENVILLE PLANT, GREENVILLE, OHIO

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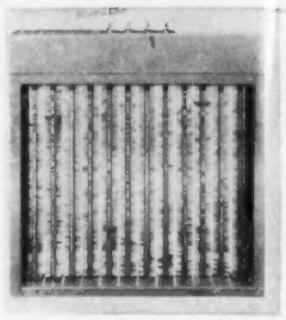
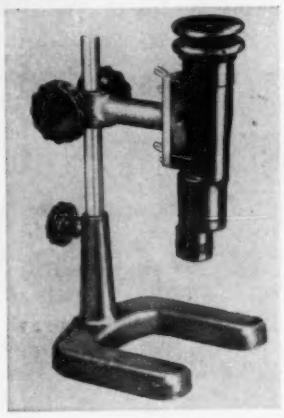
FORCED AIR DUCT HEATERS for ovens, dryers, air conditioning



Parallel rows of Vulcan finned strip electric elements, mounted in a steel frame, comprise the forced air duct heaters for such industrial applications as heated air blasts, ovens, and dryers. They also provide comfort warmth in air conditioning systems. The finned strips offer minimum air resistance. Two models with either three or six rows of heaters are made in lengths from 7⅜ to 38⅞ in. in ratings from 1800 to 20,700 w. Steel or chromed sheaths are supplied. Thermal controls for ranges of 60 to 250° F or 100 to 550° F are optional. Made by **Vulcan Electric Co.**, 88 Holten St., Danvers 7, Mass.

▲ For more details circle NED-323 M8 on enclosed inquiry slip ▲

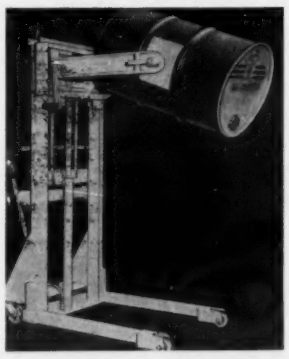
INDUSTRIAL MICROSCOPE for quality control checking



This erect-image, low-power industrial microscope is a precision, relatively low cost instrument for product inspection, materials examinations, and assembly work. It has rack and pinion focusing, color corrected optics, and turnable body for inclined views. Basic scope is 5 X at working distance of 11 in. and field diameter of 1¾ in. Magnifications of 10 and 10 X are provided by lenses mounted in cells which slip over the basic lens. Accessory objectives are available for 15, 30, and 40 X magnification. Stand adjusts for ¾ to 6½-in. distance under the objective. Total cost is $19.95. Made by **Edmund Scientific Co.**, 180 E. Gloucester Pike, Barrington, N. J.

▲ For more details circle NED-324 M8 on enclosed inquiry slip ▲

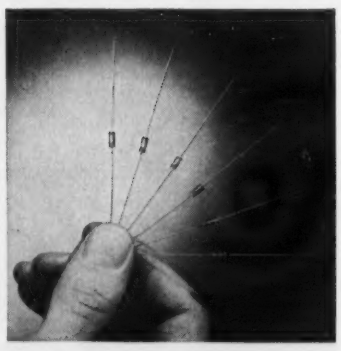
FRONT END DUMPER & STACKER handles 15 to 55-gal drums



With a lift capacity of 750 lb, this Tubar Stak-R-Dump front-end dumper and stacker will handle 15 to 55-gal drums. Unit dumps or pours from a maximum height of 48 in. at a 30-degree angle. Hand operated, double - action hydraulic pump adjusts to raise a load 1½ in. per pumping cycle. Screw type vise clamp will pick up drums from floor or rack in either vertical or horizontal position. Front end pivot point allows controlled pouring. Unit sells for $425. Made by **Uhrden, Inc.**, Tubar Dump Div., 508 Grant St., Dennison, Ohio.

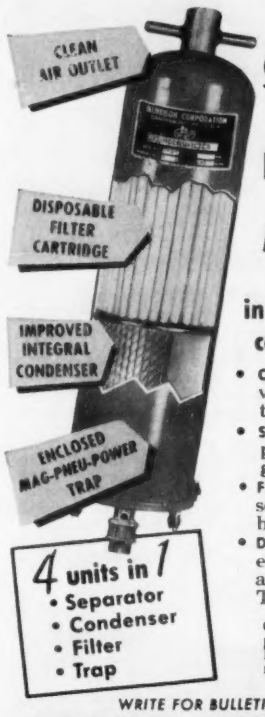
▲ For more details circle NED-325 M8 on enclosed inquiry slip ▲

GERMANIUM DIODES are sealed subminiature types



High forward conductance and back resistance, fast recovery time, and aging for stability are features of line of hermetically sealed, subminiature, glass package diodes. They have gold bonded construction in which a gold whisker wire is welded into the germanium pellet. Two classifications are offered. One is an extensive line for general-purpose and computer use, and the other line covers special computer diodes in which ten operating characteristics are specified. Made by **Ohmite Mfg. Co.**, 3682 Howard St., Skokie, Ill.

▲ For more details circle NED-326 M8 on enclosed inquiry slip ▲



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REDUCE *maintenance*
MAINTAIN *accuracy*
in pneumatic instruments, controls, and machinery

- CONDENSE oil and moisture vapors—for maximum protection of pneumatic systems
- SEPARATE entrained liquids—preventing corrosion and sluggish equipment
- FILTER contaminant solids—scale, rust, dirt, with disposable cartridge
- DISCHARGE all condensates and entrainments with built-in, automatic Mag-Pneu-Power Trap

4 units in 1
• Separator
• Condenser
• Filter
• Trap

Capacities: M-100T, 100 scfm at 100 psig; M-30T, 30 scfm at 100 psig. Both models of rugged construction, require only 1 hour per year servicing.

WRITE FOR BULLETIN 4158
HANKISON CORPORATION
College & Pike Canonsburg, Penna.

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Milwaukee 4, Wis.

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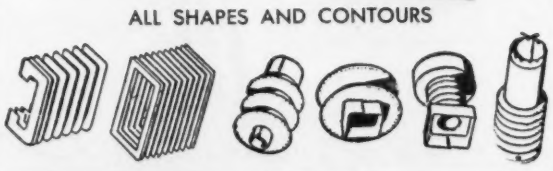
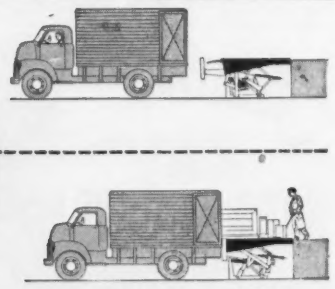


▲ For more details circle NED-328 M8 on enclosed inquiry slip ▲

NEW Automatic DOCK RAMP



Truck actuated . . . needs no counterweight
- Completely mechanical operation, powered by truck backing against ramp bumpers.
- Controlled tension spring assembly provides smooth operation and eliminates need for expensive counterweight.
- Positions automatically . . . has five other completely automatic features including cross traffic safety lock and self-aligning bumper.
- Low in cost and easily installed . . . recessed and front-of-dock models.

Rotary AUTOMATIC DOCK RAMP
GET FACTS TODAY
TEAR OUT this page, clip to letterhead and mail to
ROTARY LIFT CO.
Division of Dover Corporation
1172 Kentucky, Memphis 2, Tenn.

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MORSE 3/16"-PITCH CHAIN

TOUGH, TINY SILENT CHAIN HANDLES UP TO 10,000 RPM!

Get more components into less space with Morse 3/16"-pitch Silent Chain. It transmits power smoothly as a belt at speeds up to 10,000 rpm, with 99% efficiency. Patented coupling link makes assembly and removal easy, permits design of fixed center drives without assembly problems. For full engineering data, write today for Catalog 3SC-58. MORSE CHAIN COMPANY, DEPT. 19-128, ITHACA, N. Y. A Borg-Warner Industry. Export Sales: Borg-Warner International, Chicago 3, Illinois.

IN POWER TRANSMISSION THE TOUGH JOBS COME TO **MORSE** BW *Trademark

For more details circle NED-330 M8 on enclosed inquiry slip

NOW! SAFER STRONGER 300-POUND BRONZE GATE VALVES

WITH NEW CYLINDRICAL BODY SHAPE

Here's a bronze gate valve with a new body shape giving increased strength against both internal pressures and piping strains . . . with huskier, wider hex ends that give a firmer wrench grip. Improvements inside these valves include high wear-resisting Exelloy steel (12% chromium), expanded-type body rings and easy-to-replace hard bronze disc that takes normal seating wear. Priced no higher than bronze valves with integral seats. Sizes ¼ to 3 in.; rising and non-rising stem types.

Get full facts on these more durable, maintenance-saving valves. Ask for Circular AD-2340.

CRANE VALVES & FITTINGS

PIPE • PLUMBING • HEATING • AIR CONDITIONING

Since 1855—Crane Co., General Offices: Chicago 5, Ill. Branches and Wholesalers Serving All Areas

For more details circle NED-331 M8 on enclosed inquiry slip

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Used in Leading Plants All Over The World

PRINT DIRECT
Speeds Up Freight Marking

Get 1000 or More PERFECT Impressions from ONE Stencil Without Re-inking! Duplicator Made of Rustproof METAL

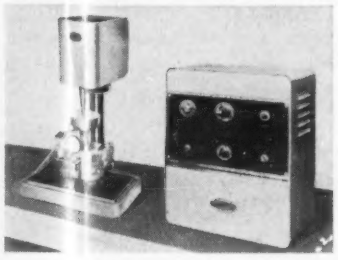
THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

No. 3 Complete Outfit (at right, and in use above), F.O.B. Factory $19.50. At office or shipping room supply dealers . . or write for free catalog and sample FORM-CUT stencils.

OVER 35 YEARS MULTISTAMP STENCIL DUPLICATOR® THE MULTISTAMP CO. NORFOLK, VA.

For more details circle NED-332 M8 on enclosed inquiry slip

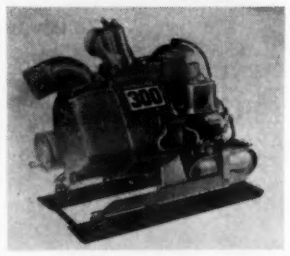
ULTRASONIC GRINDER
impact unit works various materials



Cutting, slicing, drilling, grinding, and trepanning of regular or irregular shapes can be performed quickly, accurately, and economically by the Model 2-335 ultrasonic impact grinder. It uses a magnetostrictive transducer and has a 100 per cent duty cycle. It can work semiconductors, ceramics, ferrites, carbides, metals, jewels, and other hard or brittle materials. Base mounted cutting head has adjustable cutting force and a built-in force dial. Slurry tray is readily removed for cleaning, and tool cones are easily interchanged. Price is under $1000. Made by **Raytheon Mfg. Co.**, 100 River St., Waltham 54, Mass.

For more details circle NED-333 M8 on enclosed inquiry slip

SELF-PRIMING PUMPS
powered by gasoline engine

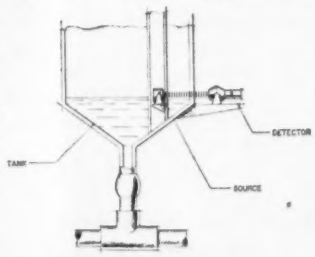


Two-cycle Model 8 engine of the 300 Series of 3-in. self-priming centrifugal pumps starts quickly, even in cold, wet weather. Self-cleaning abrasion resistant construction permits handling of muddy and sandy water without clogging. Quiet, slow-speed Model 8S3-1 has a total head of 65 ft. Fast-priming, standard speed Model 8S3-1R has a total head of 125 ft. Model 8S3-1P delivers 102 gpm at 60 psi and has a total head of 185 ft. It is suited for jetting, fire fighting, and other jobs requiring high discharge pressures. Each pump weighs 103 lb and has manual throttle control. Made by **Homelite**, 622 Riverdale Ave., Port Chester, N. Y.

For more details circle NED-334 M8 on enclosed inquiry slip

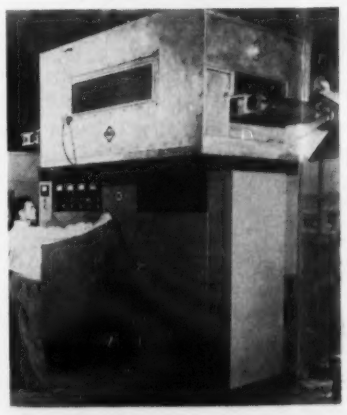
LEVEL GAGE
employs radioactivity detection

Presence or absence of liquid at a preset level is indicated by the Model 40105 predetermined level gage. A scintillation detector, outside the tank, detects and records radioactivity strength from a source on a horizontal plane with the detector. Source can be either inside or outside the tank. Changes in radiation strength indicate presence or absence of liquid at the desired level. Gage is sensitive to changes of a few thousandths of an inch. It can be coupled with automatic valve and drain controls to maintain liquid at the needed level. Coke storage tanks, molten glass furnaces, oil tanks, and milk tanks are typical applications. Made by **Radiation Counter Laboratories, Inc.**, 5121 W. Grove, Skokie, Ill.



For more details circle NED-335 M8 on enclosed inquiry slip

DIELECTRIC HEATER
for lab heating, baking, curing



Oven of this 15-w dielectric heater is mounted on top to conserve floor space. Heater is used in drying operations as well as for speedy heating, baking, and curing of nonconducting materials. Mounted on rollers, the heater is easily moved about. It occupies only 4½ x 8 ft of floor space and is 10 ft 2 in. high over-all. Removable oven front affords accessibility and allows the use of an endless type belt. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

For more details circle NED-336 M8 on enclosed inquiry slip

R-W "Zig-Zag"
CONTINUOUS POWER
CONVEYORS
...for efficient, economical overhead materials handling!

Pictured above is an R-W "Zig-Zag" installation in the meter shop of the Northern Illinois Gas Company . . . a plant described as being "as modern as tomorrow". R-W "Zig-Zag" Conveyors efficiently utilize valuable overhead space to provide a continuous flow of materials for maximum production. Extremely flexible . . . easily moves up, down, in, out and around . . . will carry unit loads up to 125 lbs. at speeds from 1 inch to 100 feet per minute . . . may be quickly and easily altered, expanded or relocated. Write today for complete information...request Cat. No. A-93R.

RICHARDS-WILCOX MFG. CO.

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Quick-Releasing Fast-Braking BRAKE MOTOR

The New CLEMATIC F BRAKE MOTOR Simplifies Machine starting and stopping

*SOLENOIDS AND COILS ARE ELIMINATED. BRAKE RELEASED WHEN MOTOR IS STARTED. PERMANENT MAGNET SUPPLIES BRAKING FORCE.

*SCREW DRIVER ADJUSTS BRAKING TORQUE. POLYPHASE DESIGNS, 1800, 1200, 900 RPM. VARIOUS SPEEDS AND DESIGNS AVAILABLE.

Lower First Cost — Minimum Maintenance

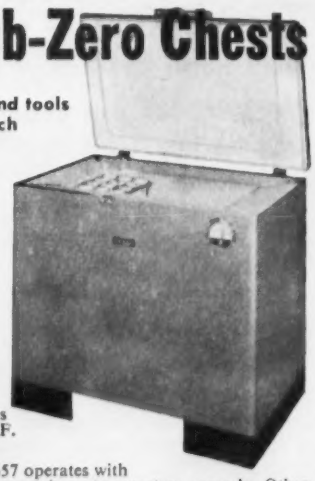
Write for data and prices.

THE **CLEVELAND** ELECTRIC MOTOR COMPANY
5213 CHESTER AVENUE • CLEVELAND 3, OHIO

For more details circle NED-338 M8 on enclosed inquiry slip

REVCO Sub-Zero Chests

- for shrink fits
- for seasoning gauges and tools
- for testing • for research
- for processing to −140°



Model RSZ503 Rivet Cooler (shown) equipped with 90 rivet canisters, temperatures to −30° F. 110V, 60 cycle, single phase.

Model SZH153 with temperatures to −95° F. 110V; 60 cycle, single phase.

Model SZH653, larger capacity, temperatures to −85° F. 110V, 60 cycle, single phase.

Model SZHC657. Same capacity as SZH653 but attains temperature as low as −140° F. 220V, 60 cycle, single phase.

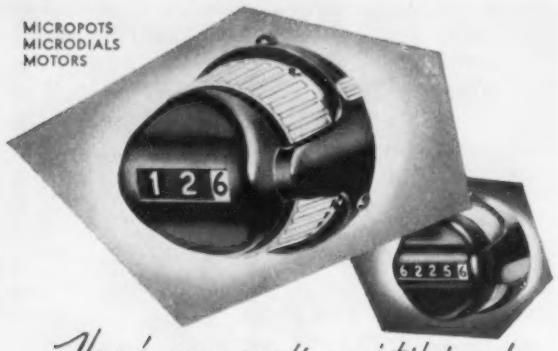
Refrigeration: Model SZHC657 operates with 3 Tecumseh hermetic compressors in a two system cascade. Other Sub-Zeros use 2 hermetics in a two stage system. Rivet Cooler operates with single hermetic unit. All models equipped with efficient fan-cooled condensers—no liquid coolant required. *Write Today for Full Specifications and Prices.*

Description	Model	Cu.Ft.	Temp. Range Pm. 70°	Temp. Range Rm. 110°	Outside Dim. L	Outside Dim. W	Outside Dim. H	Inside Dim. L	Inside Dim. W	Inside Dim. H
Sub-Zero	SZH153	1.5	−95° F.	−85° F.	42"	28"	42¾"	23"	9"	12½"
Sub-Zero	SZHC53	6.5	−85° F.	−75° F.	60"	28"	42¾"	47"	15"	16"
Sub-Zero	SZHC657	6.5	−140° F.	−125° F.	60"	28"	42¾"	47"	15"	16"
Rivet Cooler	RSZ503	5.0	−30° F.	−20° F.	42"	28"	41"	30"	16"	18"

REVCO, Inc.
Setting Trends in Refrigeration since 1938 Deerfield, Michigan

For more details circle NED-339 M8 on enclosed inquiry slip

MICROPOTS
MICRODIALS
MOTORS



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BORG EQUIPMENT DIVISION
THE GEORGE W. BORG CORPORATION
JANESVILLE, WISCONSIN

For more details circle NED-340 M8 on enclosed inquiry slip

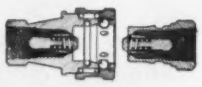
Wherever 2-way shut-off is required...

HERE'S THE COUPLING FOR THE JOB

HANSEN
SERIES HK®

TWO-WAY SHUT-OFF COUPLING

shuts off both sides of line... prevents loss of liquid, gas or pressure



To connect a Hansen Two-Way Shut-Off Coupling, you merely pull back the sleeve and push the Plug into the Socket. To disconnect, just pull back the sleeve. No tools required. When Coupling is disconnected, similar valves in Socket and Plug shut off both ends of line – practically eliminate spilling of liquid or escape of gas at instant of disconnection.

Hansen Series HK Two-Way Shut-Off Couplings are available with female pipe thread connections from 1/8" to 1" inclusive. Available in brass or steel.

One-Way Shut-Off and Straight-Through Couplings also available.
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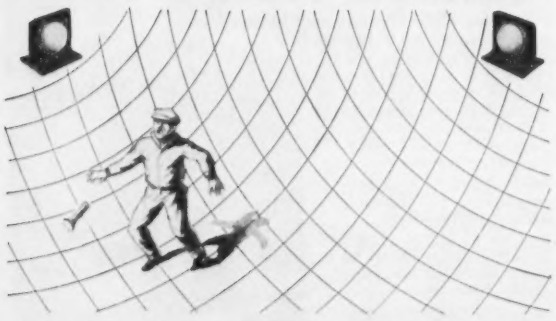
Representatives in Principal Cities

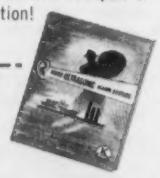
THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 35, OHIO

For more details circle NED-341 M8 on enclosed inquiry slip

TRAP THIEVES WITH SILENT SOUND!



Get complete wall-to-wall, floor-to-ceiling burglar protection with the Kidde Ultrasonic Burglar Alarm System. Can't be bypassed, can't be sabotaged, completely tamper-proof, even traps lock-ins. Uses high-frequency sound waves which can't be heard. Qualifies for Underwriters' Labs Number Two Certification! Send coupon or write today for booklet and complete information!



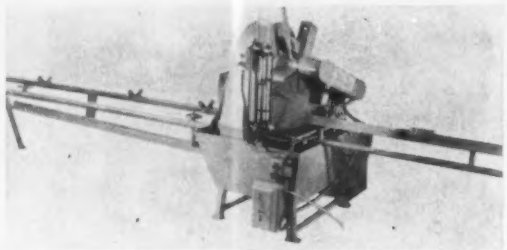
WALTER KIDDE & COMPANY, INC.
Ultrasonic Division
1224 MAIN ST., BELLEVILLE 9, N. J.
Please send me your Ultrasonic Burglar Alarm System Booklet.

NAME _____
ADDRESS _____
CITY _____ STATE _____

For more details circle NED-342 M8 on enclosed inquiry slip

CUT-MACHINING UNIT
16, 18, and 20-in. wheels offered

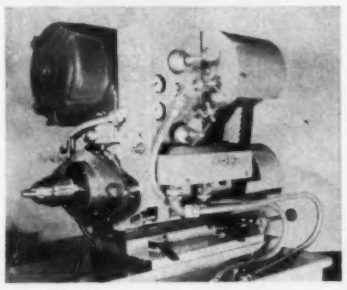
Clamping, movement of the cutting head through the work, and coolant flow cycle occur automatically after actuation of the Wallace cut-machining unit by a push-



button. Rate of saw travel is infinitely variable to suit the wide range of materials which can be cut. Easily set up, the machine is offered with an 11½-ft long matched work aligning unit (shown at left) and an 11½-ft long gage unit (at right). The 16, 18, and 20-in. wheels have 4½, 5½, and 6-in. OD tubular; 2, 2½, and 3-in. square; and 5, 6, and 8-in. I-beam capacities, respectively. An accessory work material stand is 14 ft long and has a 1-ton capacity. Made by **Wallace Supplies Mfg. Co.**, 1300 Diversey Parkway, Chicago 14, Ill.

For more details circle NED-343 M8 on enclosed inquiry slip

AUTOMATIC DRILL UNIT
powered by 1/3 to 1½-hp motor, has 600-12,000-rpm speed range



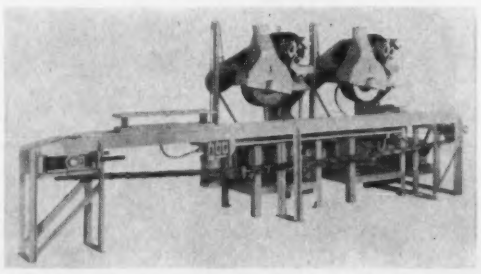
With a single-speed 1725-rpm motor, this Beco Model 505 automatic drill unit provides a spindle speed range of 600 to 13,000 rpm. It is especially adapted for single-point-tool hollow milling, end forming, pointing, chamfering, as well as drilling and tapping. Drill is powered by standard dual voltage NEMA-frame foot-mounted motors rated ⅓ to 1½ hp. One-piece rigid spindle is supported at both ends in the quill. Chuck capacity range is 0 to ½ in.

Unit has a maximum 1½-in. stroke and repeat accuracy on hole depth within ±0.002 in. Thrust is up to 980 lb at 100-psi maximum air pressure. Available attachments are a hydraulic unit to control drill break-through, a self-reversing tapping unit, a broken tool detector, and a tool in-feed interruption device to withdraw chips on deep-hole drilling. Made by **Batchelder Engineering Co.**, 125 Main St., Springfield, Vt.

For more details circle NED-344 M8 on enclosed inquiry slip

BUFFING MACHINE
reciprocating unit is automated for low or high production runs

Delivered wired for immediate use, the Wilson reciprocating buffing machine can be supplied with any number of buffing heads (two are shown). For low pro-



duction runs, its conveyor can be run forward and reverse under the buffing heads, using only one fixture. On high production runs, the conveyor runs as a continuous over and under machine by installation of the desired number of fixtures on the conveyor chain. In continuous operations it will handle parts up to 4 ft long.

Pieces up to 20 ft long may be buffed by providing the proper conveyor length. Conveyors can be supplied to accommodate fixtures of any width from 6 to 12 in. Drive is by a variable speed brake motor. A swivel adjustment at the base of each head permits cross buffing. Heads are supplied with 5, 7½, 10 or 15-hp dustproof motors. Made by **Wilson Buffing Chuck & Machine Co.**, 22730 Dequindre, Warren, Mich.

For more details circle NED-345 M8 on enclosed inquiry slip

NEW Atlas 12" Lathe
Built to handle bigger jobs with dependable PRECISION!

The new Atlas back-geared 12" lathes have big Capacity – 12¼" swing over bed, 12" swing over saddle wings, 8" over cross slide, up to 36" between centers. They're ruggedly built throughout with Timken tapered roller bearings, 16 spindle speeds, reversible power cross feed and longitudinal feed, wide thread cutting range, V-Belt drive and heavy beds with ways precision ground to within .001" in all planes. These and other big-lathe features, *standard equipment* on Atlas, give you greater capacity, versatility and performance than have ever before been available at or near their low price. Available in bench models with standard change gears or quick-change gears, and in two underneath drive models with pedestal base as illustrated. See them at your Atlas dealer's, or –

WRITE FOR ILLUSTRATED CATALOG

ATLAS PRESS COMPANY
12-15 N. PITCHER STREET - KALAMAZOO, MICHIGAN

For more details circle NED-346 M8 on enclosed inquiry slip

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and be sure you get
JENKINS
Renewable Composition
DISCS

MADE BY THE ORIGINATORS OF RENEWABLE DISC VALVES

Jenkins Bros. has remained the leader in composition disc development and production since 1864, when the first renewable disc valve was introduced.

THE ONLY MANUFACTURER OF BOTH VALVES AND DISCS

Jenkins Bros. devotes continuous laboratory and field research to disc improvement through use of new compounds, and new production techniques.

WRITE FOR NEW GUIDE FOR DISC SELECTION

Describes all Jenkins Discs, and their applications for steam, hot and cold water, air, gas, oil, gasoline . . . including the new TEFLON® DISC for lasting, dependable control of oxygen and other gases, solvents, acids, alkalies, and other chemicals,—and for liquid food and similar services.

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JENKINS VALVES

LOOK FOR THE JENKINS DIAMOND TRADE JENKINS MARK ®
Jenkins Bros

For more details circle NED-347 M8 on enclosed inquiry slip

WHY PAY THEM TOP WAGES TO WAIT?

New McCaskey System stops costly waiting at tool crib—adds more working time at machines—increases production

New advances in McCaskey's famous Tool Crib System allow crib attendants to prepare kits of tools for jobs in advance. Machine operators simply pick them up, or they may be delivered.

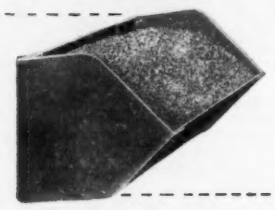
Job-tested in hundreds of plants, the new McCaskey System cuts costs dozens of ways. Pays for itself in 90 days. Write today for free booklet NED-1258.

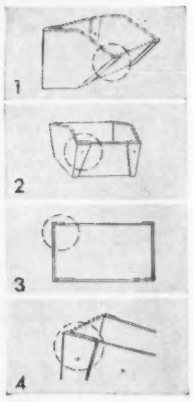
McCASKEY Industrial Controls
Tools • Gages • Scheduling • Job Assignment
Division of
VICTOR ADDING MACHINE CO., Chicago 18, Ill.
Victor Adding Machine Co. (Canada) Ltd., Galt, Ontario
Manufacturers of Business Machines, Cash Registers, Business and Industrial Systems, Electronic Equipment, Electri-Cars.

VICTOR

For more details circle NED-348 M8 on enclosed inquiry slip

LINK-BELT "HS" elevator buckets





4 ways stronger

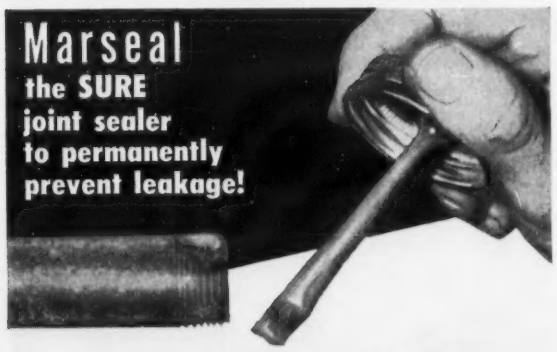
(1) Reinforced corners. (2) Rigid crimped backs. (3) Body and end plates of same gauge steel. (4) Double-thick metal for end bolt holes. You get all these long-life features with Link-Belt "High-Speed" buckets. Ideal for handling fine, free-flowing, granular materials. For facts, write for your copy of Folder 2548-A.

LINK-BELT

"HS" ELEVATOR BUCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,466

For more details circle NED-349 M8 on enclosed inquiry slip



Try it! You'll agree no other pipe thread and joint sealing compound seals like Marseal.

Marseal makes a permanent, solvent-proof flexible connection that lasts until taken apart. It is guaranteed!

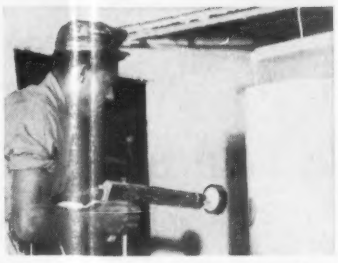
- Insoluble in gasoline, oils, kerosene, L-P gas, refrigerants, chlorinated hydrocarbons
- Makes permanent joints — easy to take apart.
- Withstands pressure and vibration.

Write now for complete information and your special introductory offer!

MARGATE MANUFACTURING CO
MARGATE, NEW JERSEY

For more details circle NED-350 M8 on enclosed inquiry slip

ELECTROSTATIC SPRAY GUN
hand model coats grounded article on all sides with little overspray



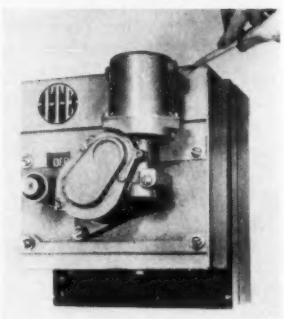
Hand-operated spray gun which uses the Ransburg No. 2 Electro-Spray process does not require conveyorized production. The gun consists of a No. 2 process atomizing bell incorporated into a lightweight unit designed for manual operation. A voltage pack is connected with a flexible cable to the gun, creating an electrostatic field between the bell and the article to be coated. The article must be electrically grounded.

Coating material is supplied to the atomizer by either pump unit or pressure tank. Rotation of the atomizing bell feeds the liquid to its outer edge, with atomization occurring under the influence of the electrostatic field. Electrostatic forces attract the spray to the article, and essentially all of the spray is deposited on the article.

The gun is especially efficient in the painting of perforated and expanded metals, tubing, rod, and wire, as the "wrap-around" nature of the electrostatic spray paints all sides of such shapes from one side. Made by **Ransburg Electro-Coating Corp.**, Box 7822, Indianapolis 23, Ind.

For more details circle NED-351 M8 on enclosed inquiry slip

CIRCUIT BREAKER OPERATOR
motor operated for remote control of switchboards and control centers



Both remote control and automatic transfer systems using I-T-E molded-case circuit breakers can be made with this motor-operated mechanism. It can be wired for any operational system desired and can be mounted on either new or existing breakers without removing them from service. Unit adds only 6 in. to the breaker depth. It can be used in switchboards, control centers, individual enclosures, and other applications for remote operation of breakers.

Breaker is opened or closed in only 15 cycles. Before a breaker can be manually operated, the electrical drive is automatically disengaged. Automatic reset of the mechanism is optional. Operator motor is available for either 120 or 240 v. Made by **I-T-E Circuit Breaker Co.**, 1900 Hamilton St., Philadelphia 30, Pa.

For more details circle NED-352 M8 on enclosed inquiry slip

CURRENT & VOLTAGE METER
has high stability for measuring resistance, voltage, and current

Unusually stable measurements of resistance, current, and voltage can be made with this R-I-E meter which features contact-modulated stabilized feedback amplifier with complete shielding. It measures resistance from 2 to 2 x 10^8 megohms with a reading error between ±1.7 and ±6 per cent. Volume and surface testing of insulating material is a typical application. Current measurements of 1 x 10^{-12} to 5 x 10^{-6} amp can be made with an error of ±1.5 to ±3 per cent of full scale. Uses include current measurement of photocells, ion chambers, and the outputs of multiplier phototubes.

Meter measures voltage from 0.005 to 500 v within ±0.5 to ±3 per cent of full scale. Uses include measurement of vacuum tube potentials under operating conditions. Self contained power pack supplies either 10 or 100 v, and an external battery for up to 500 v can be connected. A Speedomax 10-mv recorder can be connected to meter for continuous measurement recording. Made by **Leeds & Northrup Co.**, 4934 Stenton Ave., Philadelphia 44, Pa.

For more details circle NED-353 M8 on enclosed inquiry slip

Which do you have?

"Shortstub" ELECTRODE HOLDERS

Convert the total fluxed portion of every electrode into weld metal — REDUCE STUB WASTE TO A MINIMUM

TWO SIZES FILL ALL NEEDS
See your local welding Distributor or write for further information

SPECIFICATION

Model No.	Cap. Amps.	List Price
4	400	7.70
6	600	8.80

Quantity prices save you 10 to 20%

Mfd. & Ptd. By
BERNARD WELDING & EQUIPMENT CO.
Pioneer for Modern Welding
10232 AVENUE N, CHICAGO 17, ILL.

For more details circle NED-354 M8 on enclosed inquiry slip

MEASURE RPM

as low as 2/100 of 1 RPM
as high as 100,000 RPM
with **Improved**
JAQUET SPEED INDICATOR

a Chronometric Tachometer of highest accuracy and dependability

4 MODELS
0-200 RPM
0-2,000 RPM
0-20,000 RPM
0-100,000 RPM
measuring also
FPM WITH WHEEL TIP

SEND FOR BULLETIN 735

HERMAN H. STICHT CO., INC. 27 PARK PLACE, NEW YORK 7, N. Y.
Tachometer Headquarters

For more details circle NED-355 M8 on enclosed inquiry slip

Sutton NEW IMPROVED MOTOR DRIVEN **PRESSURE BLOWER**

ONE-PIECE HOUSING
SELF-CLEANING WHEEL

For
EXHAUSTING
Dust . . Smoke
Fumes . . Vapor
COOLING
DRYING
CONVEYING
Cotton . . Wool
Shavings
FORGE
BLASTING

3 SIZES
¼, ½, 1 H. P.

STRONG . . LIGHT
CAST ALUMINUM

Even, non-pulsating air flow . . 100-800 cu. ft. per min. at ½" to 6" static pressure. Straight wall construction cuts windage . . ups efficiency. 3450 r.p.m. direct connected 60-cycle motor . . open or totally enclosed. Set discharge in 8 different positions.

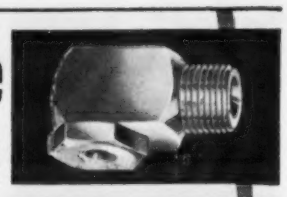
WRITE FOR DESCRIPTIVE LITERATURE

Sutton *Manufacturing Corp*
112 W. WILSON AVENUE
NORFOLK, VIRGINIA

For more details circle NED-356 M8 on enclosed inquiry slip

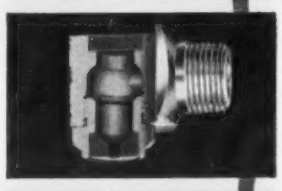
Spray Nozzle types

choice of over 12,000 basic designs



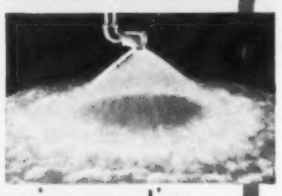
materials

brass, stainless steel, lead, hard rubber, hardened steel, tungsten carbide and many others.



performance

uniform distribution with spray angle, capacity, impact and atomization to your specifications.



to improve every spraying operation

Improve performance, lower spraying costs with Spraying Systems spray nozzles. Prompt delivery. For complete information write for Catalog 24.

SPRAYING SYSTEMS CO.
3211 RANDOLPH ST. • BELLWOOD, ILL.
ADVANCED SPRAY NOZZLE DESIGN FOR NEW DIMENSIONS IN CONTROL AND PERFORMANCE

▲ For more details circle NED-357 M8 on enclosed inquiry slip ▲

HERE'S THE WAY TO CUT THOSE ★!*!d× PRODUCTION COSTS

SPECIFY
STALWART
PRECISION RUBBER PARTS

Modern production equipment and years of compounding experience are combined at Stalwart to provide important savings in product design and production costs. Extruded, molded, die- and lathe-cut parts are mass-produced at realistic prices from all types of rubber, including Neoprene, Hypalon, Hycar, Buna N and Silicones. Rubber parts offering extreme resistance to oils, temperature, abrasion, weather and chemicals are produced to meet individual operating requirements. And Stalwart is the only producer of extruded and calendered silicone sponge shapes! Write for complete information.

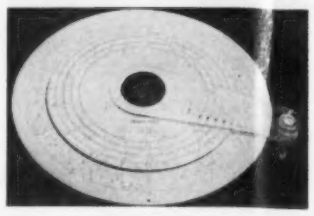
STALWART RUBBER COMPANY
151 Northfield Road • Bedford, Ohio
Plants in Bedford, Ohio and Jasper, Georgia

Get all the facts . . . Write for Bulletin 56-SR-3

S104-SR

▲ For more details circle NED-358 M8 on enclosed inquiry slip ▲

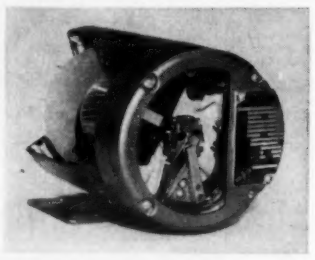
CIRCULAR SLIDE RULE
performs any slide rule calculation



Construction concept of the Dial-O-Matic Log Log Hyperbolic circular slide rule adds and subtracts scale lengths "automatically," making computations fast and easy. Log log scales read from 10^{10} to 10^{-10} with adjacent reciprocal scales. Average scale length is 17 in. Calculation is made by entering numerical factors on the scales, locking the cursor to the rotor, and indexing for the next factor entry, or for reading the answer directly on the rotor. Attention need not be paid to scale direction, or to direction of motion of the cursor in setting to factors. Rule is made of two aluminum discs with bonded white plastic surfaces, and a cursor of molded acrylic plastic. Made by **Eckel Co.**, 31 St. Joseph St., Arcadia, Calif.

▲ For more details circle NED-359 M8 on enclosed inquiry slip ▲

SEALED-SWITCH MOTORS
protected against dust and dirt



Starting switch, capacitor, thermostat, and terminal board of A. O. Smith single-phase electric motors are now sealed to make them impervious to dirt, dust, oily accumulations, and processing materials fines. This design eliminates a major cause of single-phase motor failures. Motors also feature prelubricated ball bearings and a "locked bearing" arrangement which assures constant transfer of power from motor to driven machine with minimum power loss, and also minimize belt, pulley, and bearing wear on the driven machine. Motors are available in general purpose No. 56 frame with rigid base in 1/3 to 1 1/2 hp and also as a blower motor in the No. 56 frame with a resilient base in 1/3 to 2 hp. Made by **A. O. Smith Corp.**, Electric Motor Div., Tipp City, Ohio.

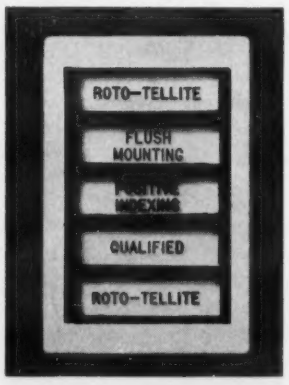
▲ For more details circle NED-360 M8 on enclosed inquiry slip ▲

AIR-HYDRAULIC BOOSTER
mounts vertically, has air filter

Vertical, rather than horizontal mounting of this air-hydraulic booster prevents dead weight of internal parts from distorting the hydraulic seal. Booster serves to convert instant action of air into the firm force of hydraulic pressure and is intended as a component for original equipment. Threaded into the breather hole of the air chamber is a filter made from tiny bronze particles pressed together to make a fine mesh. It stops grit and dirt particles in the air supply. Chambers are made of honed seamless steel tubing, and hardened steel tie-rods connect the air chamber and hydraulic chamber. Made by **Wilton Tool Mfg. Co.**, 9525 Irving Park Rd., Schiller Park, Ill.

▲ For more details circle NED-361 M8 on enclosed inquiry slip ▲

WORD INDICATOR LIGHT
rotates for front bulb changing



Lamp capsule of the Roto-Tellite word indicator light rotates to permit rebulbing from the front. Used to indicate faults or functions of equipment, unit is mounted almost flush with panel, has removable legends, and has two bulbs per capsule. Single units stack horizontally and/or vertically. They are supplied for 6, 12, or 28-v dc systems and for 115-v ac, 60 or 400-cycles. Lamp capsules are nylon. Special circuitry in a modular control capsule is an integral part of each individual light. Made by **Master Specialties Co.**, 956 E. 108th St., Los Angeles 59, Calif.

▲ For more details circle NED-362 M8 on enclosed inquiry slip ▲

Hobbs HOUR METERS for

MEASUREMENT OF USE
PROTECTIVE MAINTENANCE

Operating Time of Production and Service Equipment — AT A GLANCE!

To obtain maximum use of production and service equipment, it is essential to know the hours of operation. This information permits accurate study of utilization; also provides data needed for protective maintenance which improves performance and lengthens service through regular attention at the right time.

Hobbs Hour Meters indicate to the HOUR and MINUTE the time of equipment operation. Not a revolution counter, but a true timing instrument. ALTERNATING CURRENT meters time the operation of any equipment powered by a-c electricity; DIRECT CURRENT meters, the operation of any equipment powered by internal combustion engine or battery.

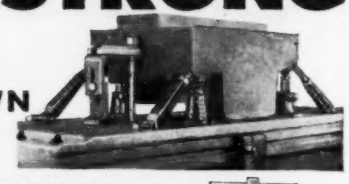
● Distributors in Principal Cities
WRITE FOR CATALOG 600

JOHN W. Hobbs CORPORATION A DIVISION OF STUART SW WARNER
2055 YALE BLVD. SPRINGFIELD, ILLINOIS

▲ For more details circle NED-363 M8 on enclosed inquiry slip ▲

ARMSTRONG

SET-UP *and* HOLD-DOWN TOOLS



ARMSTRONG Set-up and Hold-down Tools reduce setting-up time—keep men and machines producing. Designed for use on planers, drill presses, milling machines, etc., they hold work securely and rigidly, and thereby reduce spoilage and prevent costly accidents.

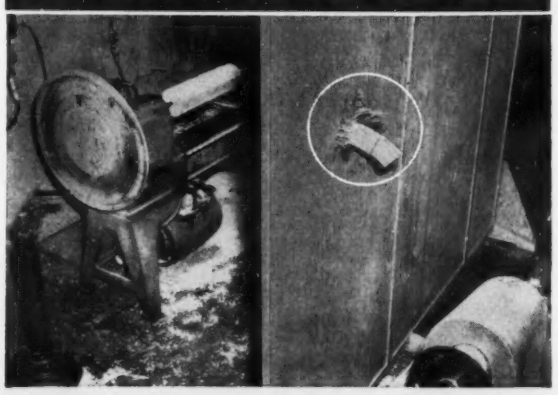
Your local Armstrong Distributor carries ARMSTRONG Set-up and Hold-down tools in stock in sizes for every operation. Stop haphazard setting-up methods. Provide each of your machines with a full complement of ARMSTRONG Set-up and Hold-down Tools.

Write for circular

ARMSTRONG BROS. TOOL CO.
5245 W. ARMSTRONG AVE. • CHICAGO 46, U.S.A.

▲ For more details circle NED-364 M8 on enclosed inquiry slip ▲

CUT COSTS with FIR PLYWOOD



Fir plywood safety screen saves life at Douglas Aircraft. Ordered into place by plant safety engineers, this lightweight fir plywood screen stopped a part hurled from a fast-spinning lathe only a few inches from a workman's head. The force was sufficient to have ripped right through lumber, metal or composition panels. Because of its outstanding strength, plywood is ideal for all types of barriers, screens and machinery guards.

Only plywood with DFPA grade-trademarks is made and tested under industry-wide Douglas Fir Plywood Association quality control program. Look for letters DFPA on the panel.

DFPA TESTED QUALITY

Write for New File Folder Catalog

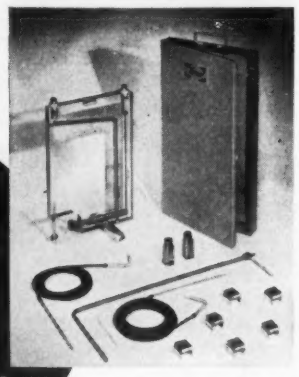
DOUGLAS FIR PLYWOOD ASSOC., DEPT. 181, TACOMA 2, WASH.

▲ For more details circle NED-365 M8 on enclosed inquiry slip ▲

Dwyer

AIR VELOCITY METER No. 400

One Instrument Tells Both Air Velocity and Static Pressure!



- Reads directly in feet per minute and inches of water.
- Check *all* velocities from 400 to 10,000 F.P.M.
- All static pressures from 0 to 10" of water.

Tests fan and blower discharge and inlet pressures, pressure drop across filters, balances air conditioning systems, etc. Complete kit includes dual purpose manometer, 18" stainless steel pitot tube, Magneclips and all necessary fittings, tubings, instructions and accessories.

Write today for literature and prices.

F. W. DWYER MFG. CO.

P.O. BOX 373-Q MICHIGAN CITY, INDIANA

For more details circle NED-366 M8 on enclosed inquiry slip

Tempilstiks

FOR ALL HEAT-DEPENDENT OPERATIONS . . .

looks like a crayon
marks like a crayon
tells temperatures like a precision instrument

Sixty-three different compositions enable you to determine and control working temperatures from 113° to 2000°F. TEMPILSTIK° marks on workpiece "say when" by melting at stated temperatures — plus or minus 1%.

Also available in liquid and pellet form . . . Write **Advertising Division** for sample TEMPIL° pellets. . . State temperatures of interest — please!

Tempil°

CORPORATION

132 WEST 22nd STREET, NEW YORK 11, N. Y.

For more details circle NED-367 M8 on enclosed inquiry slip

For Pin-Point Heat Control Accuracy

WEST BEND

CHOOSES

KLIXON

Ampli-Tube Thermostat Control Plugs

The new control-plug appliances manufactured by West Bend Aluminum Company provide homemakers with convenient, handsomely designed controlled-heat cookers . . . automatic skillets, sauce pans, and "griddle 'n servers."

To insure pin-point temperature control, West Bend uses KLIXON Ampli-Tube Thermostats for their heat control plugs. These super-sensitive thermostats accurately control the selected heat from 150° to 425° time and time again without losing their calibration.

Today leading appliance and original equipment manufacturers specify and use KLIXON Thermostats. These thermostats are available in both sealed and open construction. Temperature settings are custom calibrated to meet the customer's requirements. Send for free literature.

METALS & CONTROLS CORPORATION

Spencer Division 3312 Forest St., Attleboro, Mass.

KLIXON

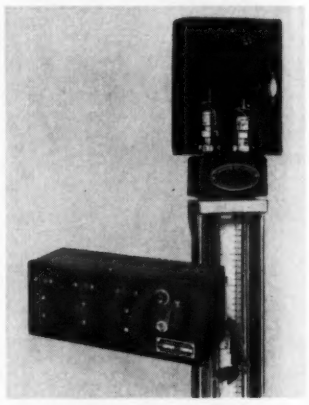
For more details circle NED-368 M8 on enclosed inquiry slip

PERSONNEL PAGING RADIO
call made by switchboard operator

Selective paging of an unlimited number of key personnel is possible with the Personal Page all-electronic radio paging system. Paging is done through switchboard operator who simply dials the appropriate number on the system's dial. The call number is transmitted by radio to a miniature receiver carried in the pocket or on the belt of the individual. Receiver emits a pleasant tone signal, alerting the user that he is being paged and to pick up the nearest telephone. The transistorized receiver has its own batteries and antenna. Tone signal continues until user depresses silencer button. Made by **Hanak Engineering Co.**, 7 Heather Rd., Bala-Cynwyd, Pa.

For more details circle NED-369 M8 on enclosed inquiry slip

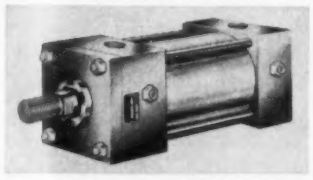
ACCURATE PRESSURE SWITCH
for alarm signaling and control



Extremely accurate, sensitive Manotac manometric - electronic pressure switch consists of a contactor manometer and a relay-power-supply package. It can be used for alarm signaling and/or control in applications involving pressure, vacuum, differential, flow, and liquid level. Make-or-break sensitivity is within 0.005 in. of water, and it can sense pressure increments as small as 0.003 oz/sq in. Switching functions are handled by the modular power pack which uses plug-in printed circuit cards. Load relays have double-pole double-throw switching action with contacts rated 5 amp at 115 v ac. Plug-in and permanent types are available in five models with from one to five contact points. Made by **Meriam Instrument Co.**, 10838 Madison Ave., Cleveland 2, Ohio.

For more details circle NED-370 M8 on enclosed inquiry slip

AIR & HYDRAULIC CYLINDERS
offered in 21 mounting styles



Adaptable for air, oil, or water service, Series A standard duty air and hydraulic cylinders are offered in 21 mounting styles. They are built to JIC standards and are rated up to 200 psi air and 500 psi oil or water. Rustproofed ferrous parts, hard chrome plated piston rods, and micro-honed brass barrels afford corrosion resistance. Block-vee piston seals and removable cartridge-retained rod seals permit operation from −20 to 150° F. Special seals for higher or lower temperatures are available. Off-the-shelf delivery of over 1 million possible different combinations is offered. Made by **S-P Mfg. Corp.**, 30201 Aurora Rd., Solon, Ohio.

For more details circle NED-371 M8 on enclosed inquiry slip

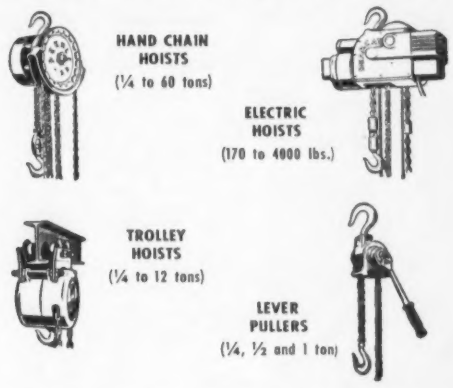
PORTABLE VIBRATOR
attaches to frame, bin, box, table

Jaws that open to 2 in. permit attachment of the 3-in. VGV portable air vibrator to almost any type of frame, bin, box, or table without the use of bolts. Tightening the integral vise-like clamp fastens it to the object to be vibrated. Unit also has a crane hook eye for moving the vibrator around the shop. It develops 3600 vibrations per minute at 60 psi with air consumption of about 20 cfm. Dimensions are 14¾ x 13 x 6 in. and weight is 90 lb. Made by **Cleveland Vibrator Co.**, 2828 Clinton Ave., Cleveland 13, Ohio.

For more details circle NED-372 M8 on enclosed inquiry slip

HARRINGTON PEERLESS HOISTS

lift and shift loads easily, help cut costs



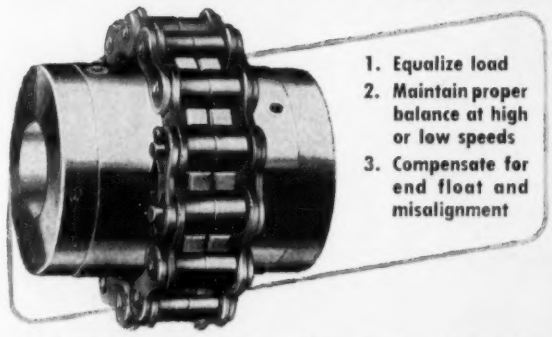
Need lifting aids for production operations? Or for intermittent maintenance work? There are Harrington Peerless cost-cutting units for both types of job. And they give safe, dependable service, too. Your local Harrington industrial distributor stocks these economical hoist products. See him or write us for a catalog today.

THE HARRINGTON COMPANY

Plymouth Meeting 16, Pa. • *Makers of Hoists Since 1876*

For more details circle NED-373 M8 on enclosed inquiry slip

LINK-BELT "RC" flexible couplings



1. Equalize load
2. Maintain proper balance at high or low speeds
3. Compensate for end float and misalignment

This triple advantage for better shaft connection results from Link-Belt's exclusive divided roller design. Other benefits include compactness, easy installation. And Link-Belt "RC" flexible couplings are readily available at all authorized Link-Belt stock-carrying factory branch stores and distributors—in 30 bore sizes from ½ to 12-in. . . . and ratings up to 1000 hp.

14,221

Write to LINK-BELT COMPANY, Prudential Plaza, Chicago 1, Ill., for Folder 2363.

LINK-BELT

"RC" FLEXIBLE COUPLING

For more details circle NED-374 M8 on enclosed inquiry slip

SIL-FOS—25 individual cartons per case containing 20 sticks per carton; .060" x ⅛" x 20".

EASY-FLO 45—25 individual cartons per case, 17 pieces per carton. 1/16" diameter wire in 20" lengths.

New small packages of Easy-Flo and Sil-Fos

Low cost . . . Buy what you need . . . USE what you Buy!

Many users of silver brazing alloys can benefit from these small packages of EASY-FLO and SIL-FOS. No more on-the-job waste, exact amounts in small quantities do away with alloy "scrap" problem—"scrap" that costs you money. Now you can "carton out" your brazing alloy for each job and know how much you're using and how much you will need. Purchase by the case or carton, either way your alloy inventory is kept to the neatly packaged minimum.

Your supplier should have the new EASY-FLO and SIL-FOS packages on his counter now. Look for the familiar Handy & Harman blue and silver colors. GET WHAT YOU NEED—WHAT YOU CAN *USE* NOW!

DEALERS—WHOLESALERS!

Stock EASY-FLO and SIL-FOS now for maximum profit. These original silver brazing alloys outsell all other brazing alloys in the U.S. combined. For details and prices see any Handy & Harman distributor (list on request) or write direct.

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Your NO. 1 Source of Supply and Authority on Brazing Alloys

HANDY & HARMAN

General Offices: 82 Fulton St., New York 38, N. Y.

DISTRIBUTORS IN PRINCIPAL CITIES

For more details circle NED-375 M8 on enclosed inquiry slip

Whatever You Need in WIRE SHAPES and FORMS ...ask SOMMER!

Ask Sommer first for whatever you need in precision wire parts or products. We have complete equipment to handle your job from start to finish.

We offer finest facilities for automatic fabrication, flattening and punching, threading, spot and butt welding.

Finishes include baked enamel, cadmium, brite zinc, brite nickel, nickel chrome and mill finishes —in both barrel and fully automatic equipment.

We make our own tools, saving time and money for you.

Tell us your needs. Send sample, blueprint or drawing. We will submit recommendations and quotations promptly.

SOMMER
METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

For more details circle NED-376 M8 on enclosed inquiry slip

POTDEVIN CAN SOLVE YOUR SPECIAL GLUING or COATING PROBLEM

Hundreds of machines available that were designed for special industry applications.

Let us know your problem. We'll be happy to submit recommendation.

If your problem is high speed coating of paint, varnish, glue, latex, etc. — POTDEVIN's sixty years of specialization in coating equipment can quickly help you solve it . . . guaranteeing initial low cost and top efficiency. Illustrated is just one of hundreds of special machines. It laminates rolls of materials up to 20" wide at speeds up to 50 feet per minute.

ESTABLISHED IN 1893
POTDEVIN MACHINE CO.
273 North Street • Teterboro, N. J.
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

For more details circle NED-377 M8 on enclosed inquiry slip

NEW! This motor works under water!

The Louis Allis IMMERSIBLE MOTOR

Here's an electric motor that's designed for continuous operation immersed in a liquid! Works in vat or sump — or at the bottom of a pool, lake, or ocean. You save the cost of shafting and bearings required by conventional surface-mounted motors.

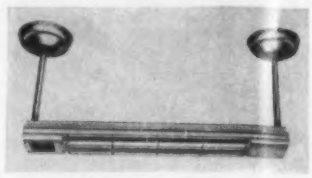
The new Louis Allis immersible motor is completely leak-tight . . . can operate in fresh or salt water, sewage, chemicals, abrasive cutting oils, etc. It's ideal for vertical or horizontal mounting on pumps, agitators, mixers, and special equipment. ¾ to 40 hp. Send for Bulletin No. 2300. The Louis Allis Co., 436 E. Stewart St., Milwaukee 1, Wis.

SM-110

LOUIS ALLIS

For more details circle NED-378 M8 on enclosed inquiry slip

ELECTRIC COMFORT HEATER
ceiling unit has direct radiation for difficult-to-heat plant areas



Desks, work benches, machinery, and other objects became generators of radiant heat when they receive direct radiation from a ceiling-mounted Chromalox electric comfort heater. Suitable for general use, the radiant fixture can be used in hard-to-heat areas, particularly where room temperature cannot be maintained.

The Type SKR unit is equipped with two 12-in. fixture stems for mounting below combustible ceilings as a supplemental or the sole heat source. With an input controller, the radiation of one or several heaters can be set to suit individual requirements, regardless of outside temperatures. Thermostats may be used to control room temperature, and magnetic contactors permit operation of thermostat and input controller on high ratings. Six heated lengths from 16½ to 78 in. have ratings of 800, 1100, 1800, 2500, 3000, and 3600 w. Operation is on all standard voltages. Made by **Edwin L. Wiegand Co.**, 7500 Thomas Blvd., Pittsburgh 8, Pa.

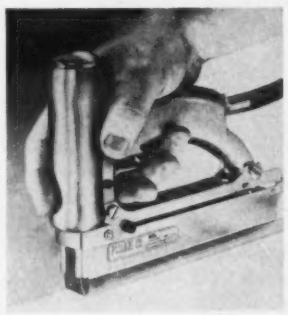
For more details circle NED-379 M8 on enclosed inquiry slip

CYLINDER ROD WIPER
keeps reciprocating rods clean

Dust, grit, weld spatter, mud, and ice are effectively cleared from reciprocating hydraulic cylinder rods by the Houghto Seal-Guard. The wiping unit consists of two bronze rings or blades which fit around the cylinder rod and seat in a recess in the gland ring. A rubber retaining ring snaps over the blades to hold them in place. The retainer also acts as a cushion to absorb shock and side loads while acting as an over-all seal. Seal-Guard is available in any size for shaft diameters from ½ to 24 in. Made by **E. F. Houghton & Co.**, 303 W. Lehigh Ave., Philadelphia 33, Pa.

For more details circle NED-380 M8 on enclosed inquiry slip

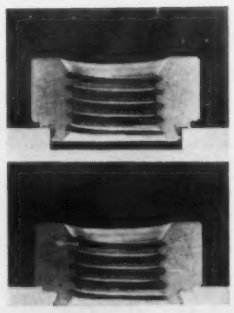
AIR POWERED STAPLERS
have air return, high-speed pistons



High performance of Model AR air powered staplers results from combined air return and high-speed piston. Jet driven air return delivers high speed action and extends tool life. High speed nylon piston drives staples without recoil. Staplers take Paslode wide and narrow crown staples in leg lengths from 3/16 to ¾ in. Made by **Paslode Co.**, 5860 Northwest Highway, Chicago 31, Ill.

For more details circle NED-381 M8 on enclosed inquiry slip

SHEET METAL NUT
self-swaging, clinch type fastener



Female-threaded SPS swage nut can be firmly anchored in sheet metal sections as thin as 0.020 in., or as thick as 0.250 in., with low installation pressures. It can be swaged into steel, brass, Monel, aluminum, and similar metals, or into harder sheet metal up to 25 Rockwell C. Nut is strong enough to break a 160,000-psi bolt before it fails. It requires no special tools, and mounts flush on the load side, and does not deform, bend, or discolor the sheet metal. Nut and metal are squeezed flat between flat plates to flow the metal into the neck of the nut. Most hydraulic or pneumatic presses with pressure control, including portable rivet setters, can be used for installation. Screw diameter sizes from No. 2 to ½ in. are available with Class 2B threads. Made by **Standard Pressed Steel Co.**, Box 581, Jenkintown, Pa.

For more details circle NED-382 M8 on enclosed inquiry slip

CUT PRODUCTION COSTS! MARK NAME PLATES 5 TIMES FASTER

MODEL EMT-2
ELECTRIC TAG TYPEWRITER
A touch of the finger delivers up to 2 tons pressure for deep, legible impressions in metal or plastic tags.

—WITH— Automark ELECTRIC TAG MARKING MACHINES

MODEL SRST-2
HI-SPEED
TAG MARKING MACHINE
Automatically marks BOTH constant and serial numbers at any desired speed up to 8,000 tags per hour!
MANUFACTURER'S AGENTS— Some Territory Still Available

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DEFIANCE MACHINE & TOOL COMPANY
1920 S. VANDEVENTER Dept. QD ST. LOUIS 10, MO.

For more details circle NED-383 M8 on enclosed inquiry slip

FOR SPEED and SAVINGS...

Specify NAYLOR PIPE, FITTINGS and FABRICATIONS

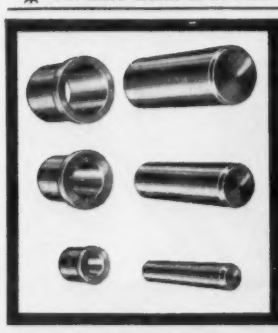
For Exhaust Systems • Water Lines
Air Lines • Gas Lines • Compressed Air Lines
Ventilating Lines • Process Lines • Pneumatic Conveyors
Sludge Lines • Vacuum Lines • Drainage Lines

NAYLOR pipe combines light weight with the extra strength and safety you'd expect only in heavier pipe. Its spiral-lockseam structure helps to absorb shock loads and vibration. Available in carbon steel, alloys and stainless steel—in diameters from 4" to 30". All types of fittings, fabrications and connections, including the one-piece NAYLOR Wedgelock coupling that speeds installation, cuts costs.

Write for Bulletins No. 507 and 525.

NAYLOR PIPE COMPANY
NAYLOR
1247 East 92nd Street
Chicago 19, Illinois
Eastern U.S. and Foreign Sales Office:
60 East 42nd Street, New York 17, N. Y.

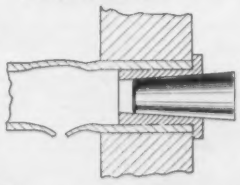
For more details circle NED-384 M8 on enclosed inquiry slip



2-piece design of ELLIOTT TUBE PLUGS offers many advantages

For Condenser and Heat Exchanger Tubes

- Quickly and effectively seals off leaky tubes without damage to tube sheets.
- Matching tapered ring and pin engineered for easy installation and dependable service.
- Designed to give even expansion of pin to ring and long contact to the seal.



EASY APPLICATION

- Place ring in tube
- Insert pin in ring, tap lightly until seated
- A few sharp blows with hammer make tight, effective seal

Available in brass, steel, stainless steel and aluminum.

ELLIOTT Company
LAGONDA PLANT, SPRINGFIELD, OHIO

Y8-4

For more details circle NED-385 M8 on enclosed inquiry slip

Full House!

...a setko self-locking set screw **for every problem**

ZIP-GRIP® SET SCREWS
Exclusive Contra-Thrust action locks at any point. Solves problems of loosening due to wear, clearance in the thread, or vibration. Can be re-used.

OFFSET SET SCREWS
When driven, two offset edges in threaded portion exert powerful spring pressure. Not affected by extreme variations in tapped holes.

CREST-LOK SET SCREWS
New, original design doesn't require precise tapping. Can be reused repeatedly. Amount of lock can be altered by changing tap drill size.

POINT-LOK SET SCREWS
This design ends top-screw loosening on two-screw applications. Lower screw can be locked with Point-Lok without disturbing original setting. Reusable.

SPRED-LOK® SET SCREWS
This design is for soft metal applications. Top is "spread" slightly to take up "flow" of soft metal. Can be re-used.

FREE, New "SELECTOR CHART"
of Self-Locking Set Screws: Illustrates and describes complete range of Setko locking actions, points, metals, combinations, etc. . . . WRITE TODAY . . . Also ask for our complete catalog No. 23

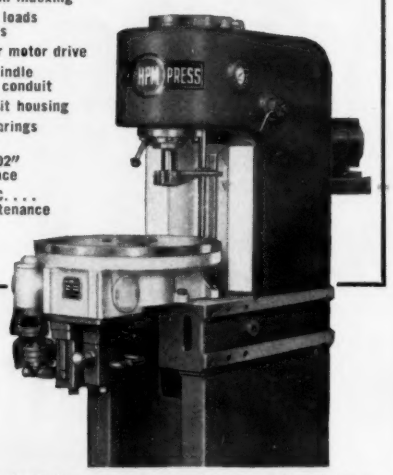
1588-R

Set Screw & Mfg. Co.
130 Main Street, Bartlett, Illinois (Chicago Suburb)

For more details circle NED-386 M8 on enclosed inquiry slip

EIGHT PRODUCTION ADVANTAGES
standard at no extra cost

- 6, 8 or 12 station indexing
- Carries heavier loads at higher speeds
- Dependable gear motor drive
- Hollow drive spindle . . . for pipe or conduit
- Sealed drive unit housing
- Anti-friction bearings throughout
- Accurate . . . .002" index.ng tolerance
- Completely J.I.C. . . . simplified maintenance



► **HERE IT IS** . . . built for a buyer's market . . . with eight exclusive features, standard, at no extra cost. More operational advantages, less maintenance worries, more for the money. The H-P-M C-Press is available in manual and automatic models, a variety of operating controls and accessories to make it adaptable to many different production jobs. Hydraulic index table model illustrated. Send for complete catalog.

THE HYDRAULIC PRESS MFG. COMPANY
A Division of Koehring Company • Mount Gilead, Ohio, U.S.A. H903

For more details circle NED-387 M8 on enclosed inquiry slip

HERE...Where Cleanliness is Critical

SPENCER VACUUM CLEANERS

Boeing Airplane Co., Seattle, Wash.

In aircraft production . . . as in other "precision" industries . . . cleanliness is more than a matter of maintenance. It's *vital* to proper quality control.

At Boeing, for example, dirt must be kept away from delicate instruments as they are installed. And areas which will be covered subsequently, must be thoroughly cleaned.

Whether *your* prime need is quality control or plant maintenance, it will pay to check on rugged, dependable SPENCER vacuum cleaners . . . industry's "tool of a hundred uses."

Request Catalog No. 1558

The SPENCER TURBINE COMPANY
HARTFORD 6, CONNECTICUT

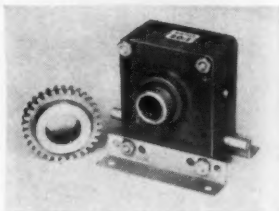
For more details circle NED-388 M8 on enclosed inquiry slip

LEVELING TRUCK
minimizes need to bend or stoop

Paper, fabric, metal, and other sheet stocks are maintained at a constant working level by the Everlevell spring truck. Unit minimizes operator stooping, bending, and reaching and can handle loads up to 500 lb. Change of only 3 lb in the load readjusts platform to proper working height of about 29 in. from floor. Unit is easily moved about on four 2½-in. self-lubricated swivel casters. Platform measures 28 x 36 in. Custom sizes can be made for special uses. Made by **Everlevell Co.**, 3435 Melvale St., Philadelphia 34, Pa.

For more details circle NED-389 M8 on enclosed inquiry slip

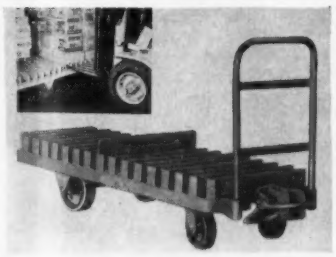
SPEED REDUCERS
small units have 3½:1 to 60:1 ratios



Aluminum driven worm gears of bearing type alloy in SW-1 fractional horsepower speed reducers provide up to three times the torque capacity of molded nylon gears. Nylon gears will continue to be available. Solid or hollow output shaft units with ratios of 3½:1 to 60:1 are offered. The complete unit with molded nylon Fiberglas case and machined steel worm gear input shaft weighs less than 21 oz and measures 3⅛ x 3⅞ x 3¾ in. Business machines, appliances, control devices, and servo mechanisms are applications. Made by **Rampe Mfg. Co.**, 14915 Woodworth Ave., Cleveland 10, Ohio.

For more details circle NED-390 M8 on enclosed inquiry slip

TRACTOR TRAILER
for palletless freight handling



Freight loaded from stock onto this trailer is towed in a train to the loading dock, then picked off the trailer by multiple fork lift trucks and carried into delivery trucks. It is then pushed off the forks by a hydraulic pusher unit. Forks pass under the trailer load in slots in the trailer bed. Fabricated of steel with mold-on rubber or steel wheels and automatic steel couplers, the trailer is designed for fast, hard tractor trailer operation, with minimum weight for easy manual handling in warehouse and manufacturing operations. Made by **SI Handling Systems, Inc.**, Box 70, Easton, Pa.

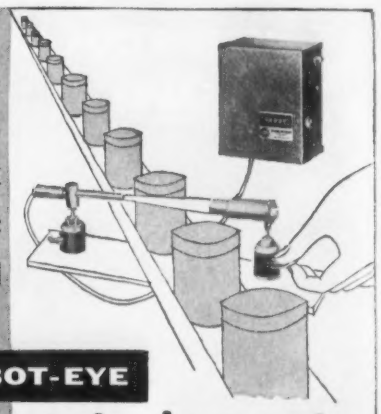
For more details circle NED-391 M8 on enclosed inquiry slip

LUBRICATING GUN
uses sealed, disposable cartridges

Waste and mess incurred in filling lubricating guns is eliminated by the Speed Gun which employs sealed, disposable lubricant cartridges. They contain either graphite cup grease or a nongraphited ball and roller bearing grease which is delivered at 8000 psi. Cartridges are easily inserted in the leakproof gun which has an extra-long piston for high grease delivery per stroke. No. 375 grease is compounded for all types of ball and roller bearings and withstands working temperatures in excess of 300° F. No. 3 cup grease contains Microfyne lubricating graphite for maximum lubrication through a wide range of pressure, temperature, and speed variations. Made by **Joseph Dixon Crucible Co.**, Graphite & Lubricants Div., 167 Wayne St., Jersey City 3, N. J.

For more details circle NED-392 M8 on enclosed inquiry slip

versatile, miniaturized, low-cost photo-electric control



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counts, sorts, inspects

RE-2 (2 pc. unit, no counter) $44.50
RE-3 (3 pc. unit, no counter) 65.00
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Trouble-Free — Proven for years in industry.
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For more details circle NED-393 M8 on enclosed inquiry slip

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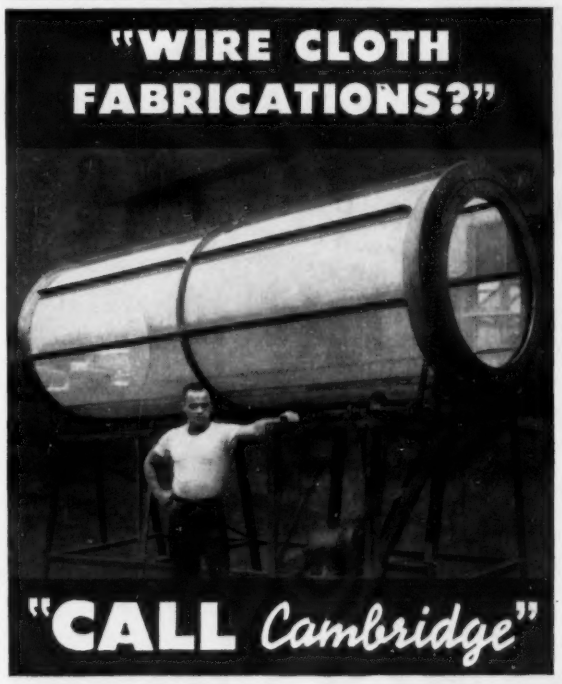

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"You tell us what you need, and we'll have it for you fast—whatever the size or shape"

Roland's right, too. Here at Cambridge he's part of a team that has produced everything from thimble-sized strainers to king-sized dewatering screens, often well ahead of schedule. Whatever your requirements, you're assured of quality workmanship and prompt service when you call Cambridge. And, we'll work from your specifications or draw up prints for your approval.

TO MEET YOUR BULK WIRE CLOTH NEEDS, we have a wide variety of specifications from the finest to the coarsest mesh—in any metal or alloy—in the most frequently used specifications ready for immediate shipment. Individual loom operation and careful inspection just before shipment assures accurate mesh count and uniform mesh size.

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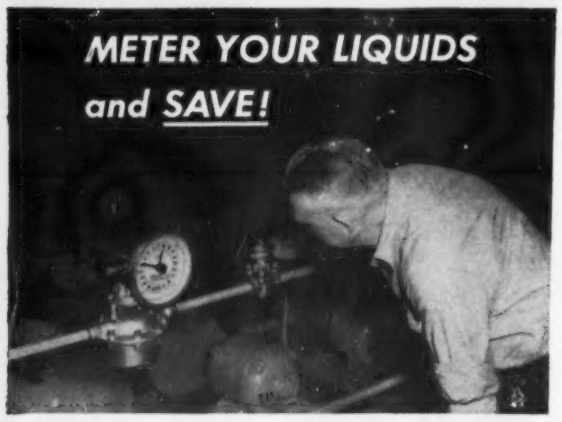
The Cambridge Wire Cloth Co.
WIRE CLOTH | METAL MESH CONVEYOR BELTS | WIRE CLOTH FABRICATIONS
DEPARTMENT C, CAMBRIDGE 12, MARYLAND
OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle NED-394 M8 on enclosed inquiry slip



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There's a Rockwell meter to measure most any liquid—oils, chemicals, paints, liquors, solvents, etc.—even corrosive fluids. Write for bulletin OG-400. Rockwell Mfg. Co., Pittsburgh 8, Pa.

INDUSTRIAL METERS
another fine product by
ROCKWELL

Rockwell ER Meter with large reset register

▲ For more details circle NED-395 M8 on enclosed inquiry slip ▲

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may be your most efficient, most economical way to:

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★ MEET "TOUGH" SPECIFICATIONS
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Ravenna, Ohio

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THE Spaulding CATALOG OF **VULCANIZED FIBRE MATERIALS HANDLING PRODUCTS**

contains full information on Spaulding long-wearing, lightweight tote boxes, trucks and barrels. It shows all standard sizes and gives data on special sizes and shapes.

Send this coupon today!

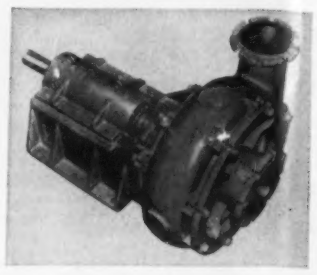
SPAULDING FIBRE COMPANY, INC.
Dover, New Hampshire

Please send your free catalog of Spaulding Vulcanized Fibre materials handling products.

Name .....
Firm .....
Address .....
City ..... Zone ..... State .....

▲ For more details circle NED-397 M8 on enclosed inquiry slip ▲

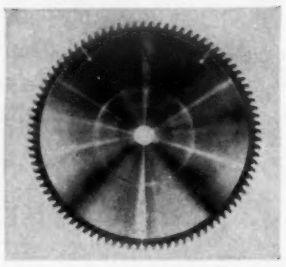
SOLIDS PUMP
handles fluids containing abrasives



Type CK solids pump, designed to handle fluids containing random size solids and highly abrasive materials, is made of these abrasive resistant metals: Semisteel, Ni-hard, cast steel, and manganese steel. It is available in 4, 6, 8, 10, and 12-in. sizes for slurries comprised of sand, coal, tailings, gravel, lime, process wastes, and other abrasive and pulpy mixtures. The 6-in. size, for example, efficiently handles $4\frac{1}{8}$-in. solids. Made by **Morris Machine Works**, 20 E. Genesee St., Baldwinsville, N. Y.

▲ For more details circle NED-398 M8 on enclosed inquiry slip ▲

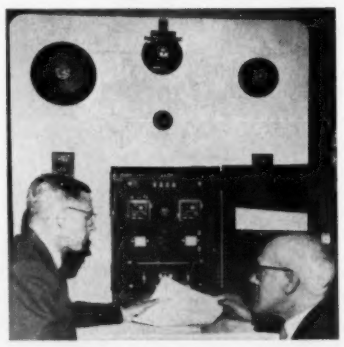
CARBIDE-TIPPED SAW BLADES
for use on nonferrous alloys



Hollow-ground style carbide-tipped saw blades provide smooth cutting along with maximum cutting clearances. This AHGF style eliminates the danger of work binding back on the body on jobs where materials to be cut cannot be clamped. The hollow-ground blade has a narrow kerf with a strong hubbed body. Saws range in diameter from 6 to 20 in. with tooth forms available for nonferrous light wall extrusions to heavy plate. Made by **North American Products Corp.**, Box 210, Edwardsville, Ill.

▲ For more details circle NED-399 M8 on enclosed inquiry slip ▲

FIRE ALARM SYSTEMS
three types available for commercial and industrial plants

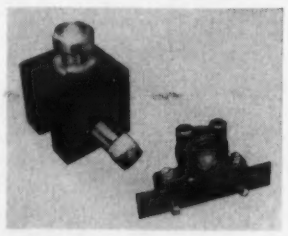


Three compact fire alarm systems are especially suited for industrial plant and commercial establishment use. Types are master code, closed-circuit, supervised; noncode, closed-circuit, supervised; and noncode, open-circuit, nonsupervised. First two ring a trouble bell upon any break in the circuit. The master code rings four rounds of a predetermined common code to all sounding devices on the system, and the noncode type causes all units to ring continuously.

Systems can be operated by individual break-glass fire alarm stations, and by rate-of-rise or fixed-temperature thermostats. As many as 20 stations can be wired into one circuit. Each station has 3-amp 120-v ac contacts. Sounding devices include single stroke bells, vibrating bells, and horns. Closed-circuit systems include an alarm control panel, enclosed in a hinged-door steel cabinet for wall mounting. Made by **Cincinnati Time Recorder Co.**, Systems Div., 1733 Central Ave., Cincinnati 14, Ohio.

▲ For more details circle NED-400 M8 on enclosed inquiry slip ▲

VIBRATION INDUCER MOUNTS
accommodate more than 20 sizes



The most effective location for Vibrolator vibration inducers can be found quickly, without welding or cutting, with the use of these clamping mount blocks. They are suited for concrete mold work and for any type hopper and chute operation. Blocks accommodate any of over 20 sizes and models in the Vibrolator line. Mounts are attached or removed with standard wrench by means of two set screws. Photo shows a single clamping mount block and a Model UCV-25. Vibrolator with mount blocks clamped to leg of an angle iron. Made by **Martin Engineering Co.**, Nedlow St., Neponset, Ill.

▲ For more details circle NED-401 M8 on enclosed inquiry slip ▲

TWO MODELS—NO WAITING

These Verson Power Press Brakes are furnished from stock

MODEL 1042
$2630*
Is the full price of this Verson quality press brake, designed and built for top performance. 16 ga. x 78" capacity.

MODEL 16-48
$1600*
will put this power press brake to work in your shop in a matter of days. Capacity is 16 ga. x 48" of mild steel.

Put famous Verson all steel construction and proved-in-service Verson design to work for you. Write for complete specifications or . . . place your order NOW!

*Prices, F.O.B. Chicago, less dies; subject to change without notice.

165
Verson
VERSON ALLSTEEL PRESS CO.
9329 S. Kenwood Ave., Chicago 19, Ill. 8300 S. Central Expressway, Dallas, Texas

▲ For more details circle NED-402 M8 on enclosed inquiry slip ▲

The Plugaroo is a combination non-lubricated plug valve and synthetic seal check valve. The valve opens and closes with a quarter turn and is available with a locking device. In open position the Plugaroo performs as a synthetic seal check valve. The clapper hinged vertically on a 20° angle seals with its own weight. The Plugaroo, manufactured to API and ASA dimensions, is currently in use in production, pipeline, LPG and secondary recovery. Write for further details.

WHEATLEY SUPPLY CO.
125 W. First • Tulsa, Oklahoma
LU 4-5175

Houston • Odessa • Shreveport • Farmington • Bartlesville • Dallas

▲ For more details circle NED-403 M8 on enclosed inquiry slip ▲

PORTABLE PAINT HEATER FEATURES *HIGH CAPACITY, LOW COST*

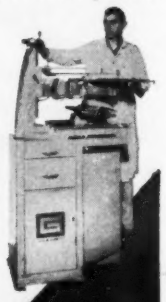
Light in weight and thoroughly insulated for comfort, the Spee-Flo 300 B2 Paint Heater is rated at a big 10 gallons per hour—adequate for almost any size maintenance or construction job. Low in cost, the 300 B2 soon pays for itself in improved quality, reduction of overspray, one-coat coverage, faster drying time and material savings up to 40% The explosion-proof heater contains no moving parts . . . is virtually maintenance-free. It can be installed in any conventional paint system in a few minutes. No special care is required for cleanout or color change. The unit comes complete with hose and cable set for operation from a standard light circuit. Write for free booklet detailing advantages and savings: "Why Hot Spray?", The Spee-Flo Company, 6614 Harrisburg Blvd., Houston, Texas.

▲ For more details circle NED-404 M8 on enclosed inquiry slip ▲

GREEN Pantograph Engravers

ELIMINATE DELAYS!

Keep the work in your own plant.



PORTABLE 40-POUND BENCH-MODEL 106

Famous 2 or 3-dimensional engraver, successfully used by thousands, features 5 positive, accurate pantograph ratios. Versatile ball bearing spindle has three speeds up to 14,000 rpm; height of pantograph and position of cutter are continuously adjustable; one copy carrier (supplied) accepts all standard master type sizes.

The Model 106 has proven incomparable for speed and accuracy . . . yet reasonably priced.

Cutter grinders, rotary tables, master letters, compound slides, name plates and all required accessories. For complete information, write to

MODEL D2 HEAVY-DUTY 2-DIMENSIONAL

- 575 pounds — rigid, sturdy, precise
- Vertical adjustment of copy table automatic with Pantograph
- Unobstructed on three sides to take large work
- Micrometer adjustment for depth of cut
- Ball-bearing construction throughout — super-precision ball bearing spindle
- Spindle speeds up to 26,000 rpm for engraving or machining modern materials
- Ratios 2 to 1 to infinity — master copy area 26" x 10"
- Vertical range over 10"

GREEN INSTRUMENT COMPANY, INC.

375 PUTNAM AVENUE, CAMBRIDGE 39, MASS.

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Get Lower Costs — Better Performance with

GENERAL PLATE

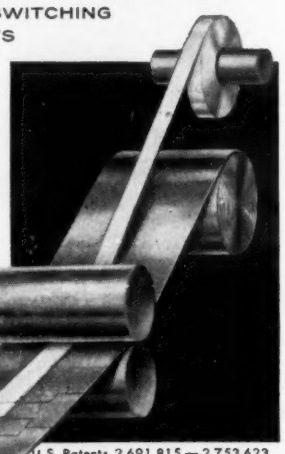
STRIPED CONTACT SWITCHING COMPONENTS

General Plate's exclusive PT* solid phase bonding process is now being used to continuously clad one or more stripes of contact metal to any desired base metal — above the surface or flush — without contaminants introduced by bonding agents.

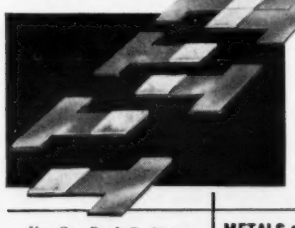
The result? A new STRIPE CONTACT STOCK which can be fed through automatic high speed presses for L-O-W cost production of electrical switching components.

Here are extra benefits — (1) contacts made of General Plate STRIPE CONTACT STOCK have the best possible electrical and thermal conductivity — (2) STRIPE CONTACT STOCK goes through forming tools like a single metal — (3) parts are ready for production as you receive them.

It will pay you to investigate the General Plate line of contacts and contact materials.



U.S. Patents 2,691,815 — 2,753,623



What metals can be bonded to produce STRIPE CONTACT STOCK by General Plate's PT bonding process?

Any combination of malleable metals can be permanently joined to produce STRIPED CONTACT STOCK in long length coils.

You Can Profit By Using General Plate Clad Metals.

METALS & CONTROLS CORPORATION
General Plate Division
1812 Forest Street
Attleboro, Mass.

▲ For more details circle NED-406 M8 on enclosed inquiry slip ▲

SILVER PLATING

"ON THE JOB" WITH POWDER

Cool-Amp Silver Plating Powder deposits a genuine coat of silver that will not peel off, and will provide lasting protection against oxidation. It has been used extensively and is accepted as equal to electroplating for bolted and stationary contacts.

Reduces Maintenance
Saves Electricity

Cool-Amp minimizes overheating and provides cool maximum conductivity for your copper, brass or bronze contacts. Used on all current carrying connections, Cool-Amp silver plating assures long life and low maintenance and will prevent series of losses from oxidation that are too small to create noticeable heat but still accumulate into major power loss. Apply to fuse clips and blades to reduce overheating.

Cool-Amp contains no cyanide and is simple to apply. It can be used by any number of people at the same time ON THE JOB in underground vaults, sub-stations and hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

One pound will silver plate approximately 6,000 square inches.

$13.50 PER POUND **SHIPPED PREPAID**

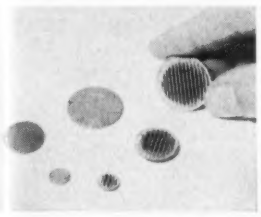
WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

The COOL-AMP Co.

Dept. ED. 8603 S.W. 17th Avenue, Portland 19, Oregon

▲ For more details circle NED-407 M8 on enclosed inquiry slip ▲

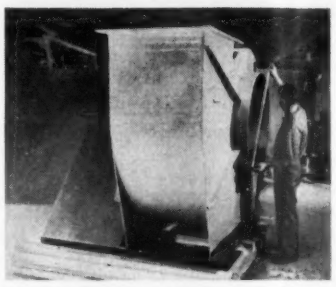
STAINLESS DISC FILTERS for hydraulic and air line use



Eight pore sizes ranging from 5 to 250 microns are provided by line of Poroloy and Poromesh stainless steel sintered porous-wire-cloth and porous-wire-mesh disc filter elements. Used for high temperature hydraulic and pneumatic line filtration, filters can also be used as orifice protectors, snubbers, atmospheric vents and breathers, catalyst beds, strainers, flame arrestors, and for gas dispersion. Poromesh elements have an 8-to-1 increase in effective filtering area for high flow rate and low pressure drop. The rigid Poroloy elements have high strength to withstand strong line pressure surges. Former are made in 25 diameters from 0.0670 to 1.2344 in., and latter are made in five diameters from 0.375 to 1.368, in three thicknesses. Made by **Bendix Aviation Corp.**, Bendix Filter Div., 434 W. 12 Mile Rd., Madison Heights, Mich.

▲ For more details circle NED-408 M8 on enclosed inquiry slip ▲

LARGE PLASTIC FAN in capacities to 35,000 cfm

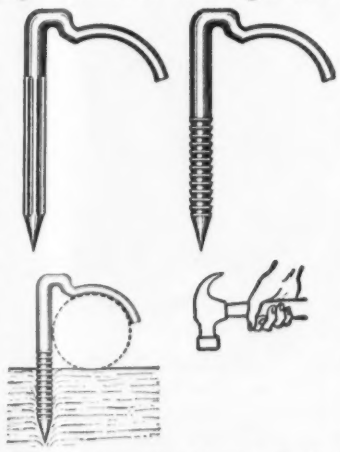


The No. 36 Rigidon fan of glass-reinforced plastic for fume ventilation will handle 27,500 cfm. Other standard units are available in capacities up to 35,000 cfm. All parts of the fan that are exposed to chemical or acid fumes are made of solid plastic. Paint is not required on any surface, inside or out. Series of fans provides size designations from No. 6 to 42. Made by **Heil Process Equipment Corp.**, 12901 Elmwood Ave., Cleveland 11, Ohio.

▲ For more details circle NED-409 M8 on enclosed inquiry slip ▲

DRIVE STRAPS hold pipe, conduit, cable, tubing

Easily driven into wood and masonry materials in same manner as nails, these drive straps facilitate installation or hanging of thinwall and rigid conduit, pipe, cable, BX, tubing, and other objects. Offered with annular thread for wood and vertical thread for masonry, these electroplated steel fasteners are made for ½, ¾, and 1-in. diameters. Prices range from $2 to $6.52 per hundred, depending on type and size. Made by **Holub Industries, Inc.**, 413 DeKalb Ave., Sycamore, Ill.

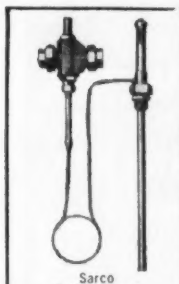


▲ For more details circle NED-410 M8 on enclosed inquiry slip ▲

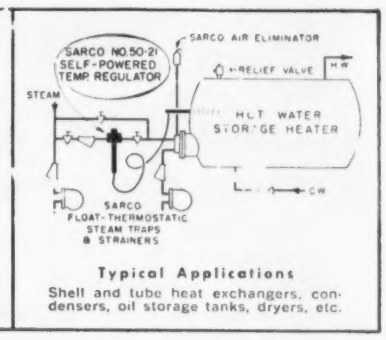
CHAIN VISE & STAND incorporates handy bender

Fast, safe operation is assured in this No. 450 portable Tristand chain vise by top screw action. Handle and nut are fastened to the base. This 42½-lb unit handles ⅛ to 5-in. diameter pipe or tube. Actually a portable workbench, it has folding legs and built-in tray which lock securely when set up, and are folded compactly and held securely for safe carrying. Rubber grommets on feet prevent slipping, and holes permit bolting it to floor. The chain vise base overhangs the legs for clear tool swing and has tool hanger slots, rear pipe rest, three-size pipe bender, and adjustable ceiling brace screw. Made by **Ridge Tool Co.**, 125 Ridge Rd., Elyria, Ohio.

▲ For more details circle NED-411 M8 on enclosed inquiry slip ▲



Sarco Self-Powered Temperature Control



Typical Applications
Shell and tube heat exchangers, condensers, oil storage tanks, dryers, etc.

Low-cost • Automatic

TEMPERATURE CONTROL

½" size—only about $100

Simple as ABC . . . a thermostat with capillary tubing and a valve. That's all! That's why this Sarco SELF-POWERED temperature control is so trouble-free . . . and inexpensive.

1. No gadgets needing a technician to read and repair.
2. Self-contained—no exposed mechanism. Packless valve.
3. Self-powered—no compressed air or electricity needed.
4. Not affected by cross-ambient temperatures or elevation of the bulb.
5. Easy to install by any pipefitter.
6. Thousands give accurate service...for firms like Colgate-Palmolive Co., Sinclair Refining Co., Swift & Co.

Write for Bulletin 620 to Sarco Company, Inc., 635 Madison Ave., N.Y. 22, N.Y.

SARCO 2237-F

▲ For more details circle NED-412 M8 on enclosed inquiry slip ▲

the Right Combination...

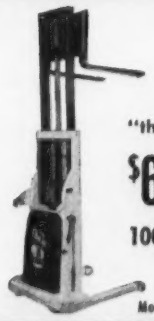
QUALITY

"the CHALLENGER"
$397.50 complete
1500 lb. capacity
Model 1056—battery operated

PRICE

"the DRUM HANDLER"
$890.00 complete
1000 lb. capacity
Model 3062—battery operated

SELECTION



"the TELESCOPIC 99"
$699.00 complete
1000 lb. capacity
Model 9972T—battery operated

MORE THAN 80 BIG JOE MODELS

Hydraulic Handling for EVERY Department

BIG JOE Manufacturing Company
Vernon Blvd.
Wisconsin Dells, Wisconsin

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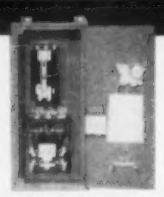
slash installation costs with FEDERAL PACIFIC

Combination Motor Starters



THERMAL MAGNETIC CIRCUIT BREAKER permits harmless temporary overloads; trips instantly when overload becomes dangerous...offers quick-make, quick-break action, thermal tripping element and deionization arc quenchers.

DISCONNECT SWITCH designed for cool operation, safety and long life. Features clear visibility, positive circuit opening and silver plated current carrying parts.

NOW Federal Pacific does away with the need for separate motor controls and safety switches or circuit breakers! Now you can meet all your needs with one simple space-saving device...and save money while you do it! You install only one device—save valuable time—conserve precious space! Faster, easier installation more than offsets the slightly additional cost. Write for bulletins 514 & 515: Federal Pacific Electric Co., Newark, N. J.

FEDERAL FPE PACIFIC

The Best in Electrical Distribution and Control Equipment

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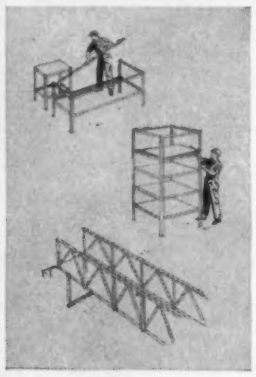

Republic METAL LUMBER

meets every framing need

Now . . . new steel building material with more framing-erection conveniences than common lumber. Republic's new slotted-angle METAL LUMBER® has unlimited applications.

Save time, space, and money in building catwalks, storage racks, special purpose facilities. Republic carries complete stocks in field warehouses for immediate shipment. Call Republic for catalog of ideas.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. • Canton 5, Ohio

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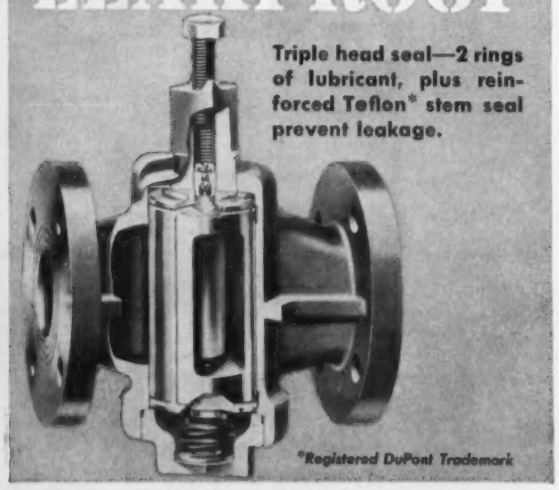
In the spots that count . . .
HOMESTEAD® VALVES ARE
LEAKPROOF



Triple head seal—2 rings of lubricant, plus reinforced Teflon* stem seal prevent leakage.

*Registered DuPont Trademark

Controlled, pressurized lubrication system forces full lubricant seal around ports, and over all sealing surfaces—positively prevents sticking. Write today for full details.

HOMESTEAD VALVE MANUFACTURING COMPANY
P.O. Box 84 • Coraopolis, Pa.

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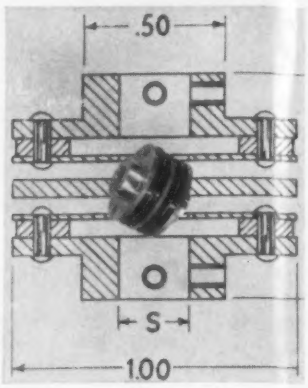
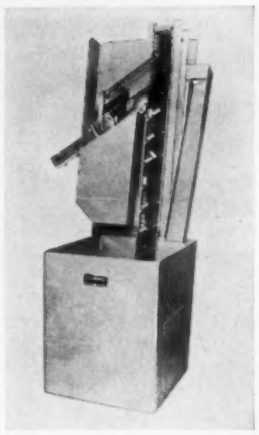
SMALL FLEXIBLE COUPLINGS
torque rated at 32 oz-in.



Angular misalignment of up to 5 degrees between two shafts can be accommodated by Model K and KA flexible couplings made for shaft sizes of 1/8 to 5/8 in. Torque rated at about 32 oz-in., couplings operate free from backlash due to multiple disc construction. Three intermediate discs are securely riveted between two hubs. Each hub has two socket head set screws for positive shaft attachment and provides for easy positioning. Couplings can be supplied for two different shaft diameters. Made by **Kenilworth Coupling Co.**, Box 75, Asheville, N. C.

▲ For more details circle NED-417 M8 on enclosed inquiry slip ▲

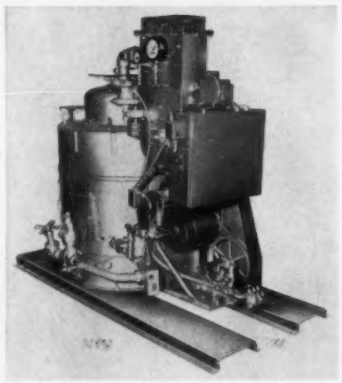
HIGH-SPEED PARTS FEEDER
is portable, self-contained unit



Completely automatic Model 2200-C high-speed parts feeder is a compact, portable unit with self - contained drive. It feeds sliding parts with 1/8 to 1-in. diameter and from 1/2 to 3-in. length, and 3/8 to 3-in. diameter rolling parts 1/8 to 1 in. thick. Unit has a 6 cu ft hopper, a 6-in. wide belt, and a variety of automatic cycling controls. Loading height is 38 in. above the floor, with take-off available on left, right, or both sides. Made by **Feedall, Inc.**, 38399 Pelton Rd., Willoughby, Ohio.

▲ For more details circle NED-418 M8 on enclosed inquiry slip ▲

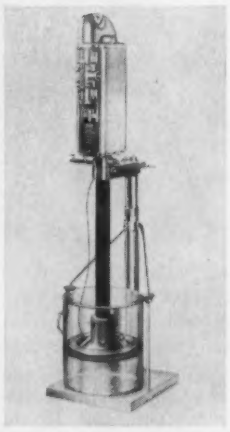
STEAM GENERATORS
six sizes from 20 to 150 bhp



Full steam pressure is produced in 2 min by a line of Kwik-Steam vapor boilers, compact units which can be moved through doors and on elevators. Their pressurized combustion space gives 1 million Btu per hour for each cubic foot of combustion area. All hot gases pass over the entire coil surface. Operating efficiency is 78 to 82 per cent. Units comply with all codes and are equipped with several standard safety controls. Fuel oil, natural or manufactured gas, or combination oil-gas burning units are offered in six sizes from 20 to 150 bhp. Made by **Littleford Bros., Inc.**, 457 E. Pearl St., Cincinnati 2, Ohio.

▲ For more details circle NED-419 M8 on enclosed inquiry slip ▲

PRESSURE PRIMER
for mastic dispensing air pumps



Used with air-operated pumps to dispense heavy lubricants, mastics, and sealers directly from their containers, this air-operated pressure primer develops up to 1500-lb dynamic pressure on the material surface. An elevator is raised by air power so the bucket of material can be set in place easily. Follower wipes sides of the container right to the bottom for little or no waste. It will take 5-gal or 25 and 50-lb containers. Made by **Lincoln Engineering Co.**, 5782 Natural Bridge Ave., St. Louis 20, Mo.

▲ For more details circle NED-420 M8 on enclosed inquiry slip ▲

NEW! BOKUMATIC RECESS TOOL HOLDER

A new standard automatic recessing tool holder has been introduced by Bokum Tool Company. Designed to accommodate Bokum standard "O" ring, retaining ring, back chamfering and thread relief cutting tools, the tool holder features a double cam action for chatter-free, precision operation. It can be used on standard drill presses, radial drills, turret lathes and chucking machines. Write for complete information.

BOKUM TOOL COMPANY, INC.
14775 WILDEMERE AVENUE
DETROIT 38, MICHIGAN

▲ For more details circle NED-421 M8 on enclosed inquiry slip ▲

Permanently End Condensation Drip, Rust and Corrosion with NoDrip Plastic Coating!

Here is the inexpensive, easy way to solve your condensation problem once and for all. NoDrip plastic coating acts immediately to insulate and protect tanks, pipes, walls, ceilings, air ducts and other metal equipment against condensation drip, rust and corrosion. NoDrip can be applied by anyone without special experience with brush, trowel or spray. NoDrip is also resistant to acid, alkali and brine...protects concrete, brick, plaster, tile, wood or composition surfaces.

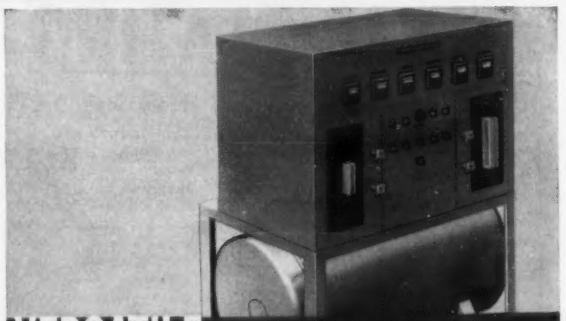
FREE

32-PAGE NoDrip DATA HANDBOOK

Complete with photographs, charts and technical information to help solve your condensation problem. Write today!

Available at leading plumbing and mill supply houses
J. W. MORTELL COMPANY 526 Burch St., Kankakee, Ill.

▲ For more details circle NED-422 M8 on enclosed inquiry slip ▲



VERSATILE MULTI-PURPOSE INDUCTION HEATER

Eliminates "haywire" setups to match loads-to-generator

- Two stations—12½- to 100-volt output for high-power density loads—100 to 800 for low-power density loads.
- Capacitance can be added to tune load during heating cycle at either high or low output stations.
- 7½, 15, 30 or 50 kw, 10 kc power supply.
- Requires only 60" x 39" floor space.

Industrial Electronics Department, Westinghouse Electric Corporation, 2519 Wilkens Avenue, Baltimore 3, Maryland.

J-35001

YOU CAN BE SURE...IF IT'S Westinghouse

WATCH "WESTINGHOUSE LUCILLE BALL-DESI ARNAZ SHOWS" CBS TV MONDAYS

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4 Reasons Why OHIO Stock Gears are a Better Buy!

1 **Better Value** OHIO gears are a better value because you get top quality gears at lower prices. Ask for a quotation and see for yourself.

2 **Top Quality** OHIO gears have gained universal acceptance among major users, through a combination of experienced engineering, fine materials and quality workmanship.

3 **Availability** 52 OHIO distributors, located in major cities across the nation, can make fast delivery on all popular styles and sizes . . . from local stock.

4 **Wide Selection** All sizes of OHIO gears are available in both 14½ and 20 degree pressure angle, and includes: spur, 3 to 64 pitch; worm, 3 to 32 pitch; bevel, 3 to 16 pitch; mitre, 4 to 32 pitch; and helical 6 to 24 pitch.

Why not make your own comparison by getting a competitive quotation on your stock gear needs. See your local OHIO distributor or write direct.

Get This Handy Catalog — the only gear catalog planned and indexed to put complete information at your finger tips.

Ohio OHIO GEAR Co.
1320 E. 179th ST. • CLEVELAND 10, OHIO

▲ For more details circle NED-424 M8 on enclosed inquiry slip ▲

50% MORE TERMINALS IN THE SAME SPACE!

SQUARE D's NEW TERMINAL BLOCKS

Write for Terminal Blocks Bulletin...
Square D Company, 4041 N. Richards St., Milwaukee 12, Wis.

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

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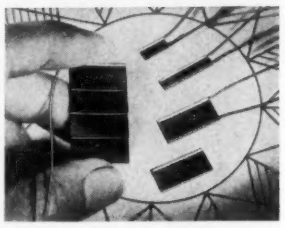
MIST COOLANT GENERATOR for various machining operations

Cleaning and refilling of the 2-gal Model 2 RH Mistic Mist generator for machining operations is accomplished without disconnecting the shop air line. Unit has a lead-coated rectangular tank, removable cover for cleaning and refilling, and an exterior sight glass for visual indication of the coolant level. The compact, 3/16-in. diameter, stainless steel nozzle is secured to a plastic covered magnet of 60-lb pull. This, and friction type universal joints that will not loosen once set, permit easy nozzle positioning. Unit contributes to improvement in tool life, production, and product finish. Made by **Aetna Mfg. Co.**, 188 S. York Rd., Bensenville, Ill.

▲ For more details circle NED-427 M8 on enclosed inquiry slip ▲

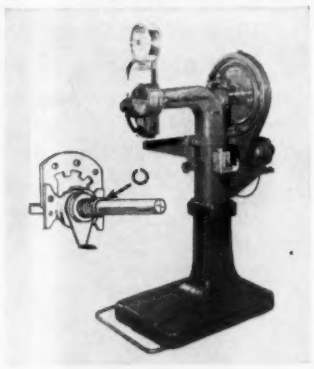
SILICON SOLAR CELLS converts 10 per cent of sun energy



Intimate bond between contact and cell results in 10 per cent or higher conversion efficiency in these ruggedized silicon solar cells. These rectangular cells are available for both commercial and military applications and will provide an output of about 9 w per sq ft of active cell area in bright sunlight. Individual cells are obtainable, with or without color-coded pigtail leads in ½ x 1-cm, ½ x 2-cm, and 1 x 2-cm sizes. Made by **International Rectifier Corp.**, 1521 E. Grand Ave., El Segundo, Calif.

▲ For more details circle NED-428 M8 on enclosed inquiry slip ▲

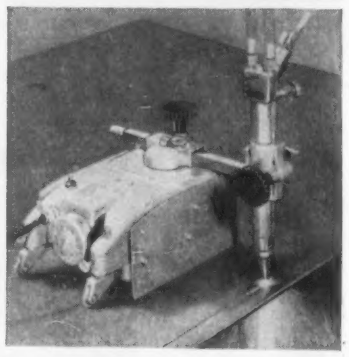
RETAINER RING MACHINE forms and applies them on shafts



Usable for many applications where retainer rings are placed on control shafts, motor shaft, and to keep covers in place, this special wire stitching machine forms and applies the retainer rings directly on the shafts. Machine may be equipped with a wide range of forming tools and handles any desired wire size. It is available with a speed control for adjusting rate from 150 to 300 cycles per minute. Made by **Ideal Stitcher Co.**, 2323 N. Knox Ave., Chicago, Ill.

▲ For more details circle NED-429 M8 on enclosed inquiry slip ▲

SAVE TIME AND MONEY



with the OXWELD CM-45 Cutting Machine

YOU SAVE TIME because the portable (29 lb.) OXWELD CM-45 will do your cutting, beveling, flame-treating, and even special welding jobs far faster than manual operations. This means *more* production in *less* time.

YOU SAVE MONEY because the CM-45 cuts gas consumption and assures superior cutting results. Rejects and costly finishing operations are eliminated.

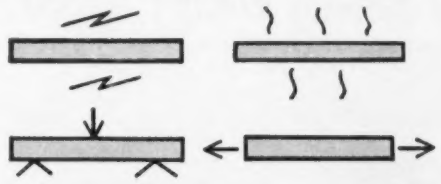
Start saving today. Call your nearby LINDE Office for a demonstration, or write for OXWELD Catalog F-4487.

LINDE COMPANY 30 East 42nd Street New York 17, N. Y.
DIVISION OF UNION CARBIDE CORPORATION

"Linde" and "Oxweld" are trade-marks of UCC.

▲ For more details circle NED-430 M8 on enclosed inquiry slip ▲

MANY PROPERTIES

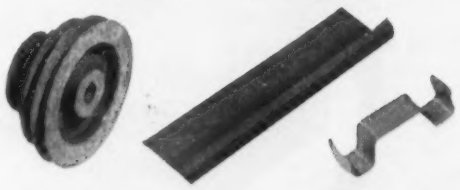


Synthane laminated plastics combine electrical properties such as high dielectric strength, high insulation resistance and low dissipation factor with chemical and moisture resistance, lightweight and good mechanical strength.

MANY FORMS

Synthane is available in sheets in thicknesses up to 8" depending upon the grade; in tubes and rods in a great variety of diameters and cross-sectional shapes; and in tubes of many wall thicknesses.

MANY USES



Synthane laminates are useful in electrical, radio, and electronic components; as gears, guides, bearings or other mechanical parts; as piping, valve parts or piston rings in chemical equipment.

ONE MATERIAL—SYNTHANE

Laminated Plastics in many grades

SYNTHANE CORPORATION
N.E. River Road, Oaks, Pa.

☐ Please send me information about Synthane laminated plastics.

Name_____
Address_____
City_____ Zone____ State____

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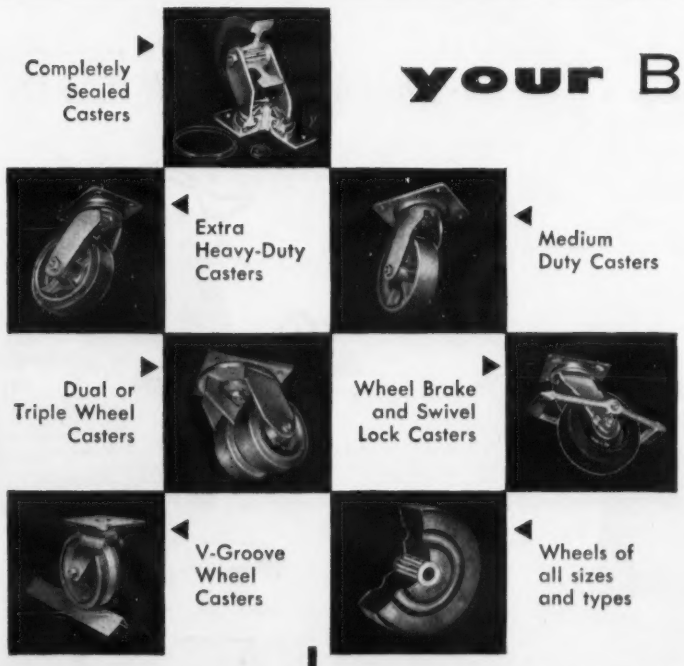
your BEST move!



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Albion casters checkmate your materials handling problems. They are versatile, dependable, economical and available *right now*. Whether you need a caster for light, medium, heavy or extra heavy duty requirements—standard or special—Albion casters are the practical answer.

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ALBION INDUSTRIES, INC.
Distributors in Every Strategic City
Main Plant: ALBION, MICHIGAN

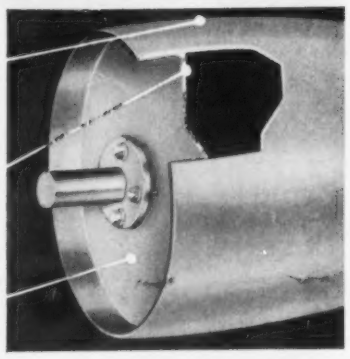
▲ For more details circle NED-426 M8 on enclosed inquiry slip ▲

NEW CURVE CROWN STEPHENS-ADAMSON WELDED ALL-STEEL PULLEYS

*CURVE CROWN DESIGN
Accurately formed Curve Crown on rim outer ends eliminates belt stretch and wear . . . increases belt training effect more than 100%.

STURDY RIM CONSTRUCTION
Absolutely round one piece pulley rims formed under hydrostatic pressure. Seam machine-welded inside and out insures 100% weld penetration.

ACCURATE END PLATE ASSEMBLY
End plates O.D. and I.D. machined to insure concentricity between bore and outer rim. Pressed fit . . . submerged arc welding for maximum efficiency.



FEATURING "SQUEEZELOCK" HUB DESIGN
Revolutionary "Squeezelock" Hub design provides gripping power for full torque transmission without keyways plus eliminating distorting loads against pulley end plates.

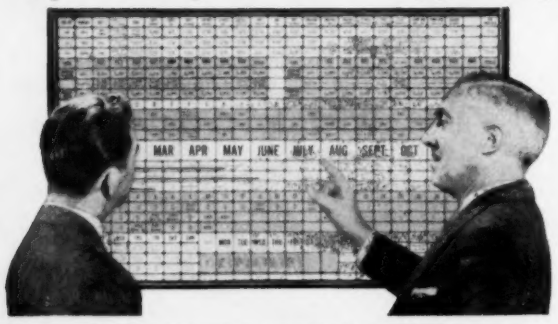
*PATENT APPLIED FOR

WRITE TODAY FOR BULLETIN 558

STANDARD PRODUCTS DIVISION
STEPHENS-ADAMSON MFG. CO.
12 Ridgeway Ave. Aurora, Illinois

▲ For more details circle NED-432 M8 on enclosed inquiry slip ▲

You Get Things Done Better By Seeing What's Happening



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Complete Price $49.50 Including Cards

FREE 24-Page ILLUSTRATED BOOKLET N-100 Without Obligation

GRAPHIC SYSTEMS, 55 West 42nd St., New York 36, N. Y.

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Try this MONEY-BACK Trial Offer on UNISORB Machinery Mounts!

We're so sure you'll find that Unisorb will save time and money every time you install a machine, we want you to prove it to yourself with this special Trial Offer.

Tell us what kind of machine you want to try on Unisorb. We'll send a complete ready-cut kit of pads and cement — then you be the judge. If not satisfied, return and we'll credit your invoice. Write or call today.

UNISORB | Division of the Felters Co.
224 South St., Boston 11, Mass.

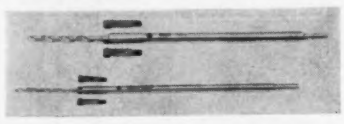
▲ For more details circle NED-434 M8 on enclosed inquiry slip ▲

MIXING MACHINE
takes up to 1-gal containers

Though developed for paint mixing, Thor-O-Mix mixers can be used for mixing other fluids. They employ a pitch-tilt throwing action that assures fast, thorough mixing of all types of liquids. Round or square containers are held securely between rubber gripping pads in cradle and are clamped in place with a hand knob. Four rubber suction feet cushion vibration and prevent creeping. This portable machine is powered with a 110-v electric motor, controlled by a switch, and can be used on floor or bench. Made by **Beck Equipment Co.**, 3350 W. 137th St., Cleveland 11, Ohio.

▲ For more details circle NED-435 M8 on enclosed inquiry slip ▲

DRILL EXTENSION
for any 1/4-in. capacity drill chuck



An extension rod and interchangeable collets comprise the Extendril drill extension which can be used with any 1/4-in. capacity drill chuck. It can be operated through drill bushings whenever necessary, can be used with broken drills, and performs satisfactorily on stainless and other hard-to-drill metals. Collets are easily loosened or tightened for replacement of drills. Series 770A and 770B accommodate drill sizes from 116 in. through No. 20 and from No. 20 through F, respectively. Rods can be ordered in 4 or 9-in. standard lengths and have maximum outside diameters of 5/16 in. in the A Series and 7/16 in. in the B Series. Made by **Ritmar Corp.**, 183 New York Ave., Huntington, L. I., N. Y.

▲ For more details circle NED-436 M8 on enclosed inquiry slip ▲

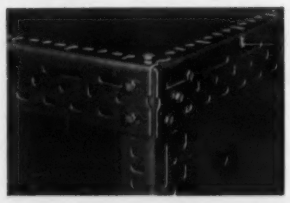
ROTARY TRANSFER MACHINE
has an integral pressing station for crimping, riveting or staking

Integral pressing station featured by this Type O Pressembler high speed rotary transfer machine performs crimping, riveting, staking, and forming operations in conjunction with automatic assembly. A roller gear drive dial indexing mechanism assures smooth transfer and is accurate to 0.001 in. with zero backlash. Press station has 14-ton capacity and a 2-in. stroke. Dial sizes of 24 or 36 in. with 6, 8, 12, or 16 stations are available.

Model E, for long and/or variable dwell cycles will produce 40 pieces per minute. Its press station and index table are separately powered and synchronized. Model M can produce up to 150 assemblies a minute. Its mechanically timed and synchronized dial and press are driven by a single motor. Made by **Ferguson Machine Corp.**, Roller Gear Div., 7818 Maplewood Industrial Court, St. Louis 17, Mo.

▲ For more details circle NED-437 M8 on enclosed inquiry slip ▲

MULTI-USE FRAMING
for racks, tables, guards, carts



Spacing of holes and slots in hot-dip galvanized Equipto Angle framing is such that it can be cut to any length and bolted together to make many items. The 12 and 14-gage weights and 10 and 12 ft lengths can be used to make storage racks, tables, guards, frames, carts, stands, derricks, and ladders. Bolts and nuts are furnished and a one-stroke cutter is available. Lengths need only be cut and bolted together for use. Made by **Aurora Equipment Co.**, Equipto Div., 422 Cleveland Ave., Aurora, Ill.

▲ For more details circle NED-438 M8 on enclosed inquiry slip ▲

THE NEW UNION MATERIAL HAND CATALOG NO. 90 IS NOW AVAILAB UPON REQUEST

▲ For more details circle NED-43

"When a motor we ins Fusetron Fuses saved

"Recently I sent several of my men to install a 50 h. p. air conditioning unit for a customer.

"It seems that my man who wired the 200 amp. switch failed to tighten a lug.

"When the unit was started, it didn't take long for trouble to develop. The loose connection caused one Fusetron fuse to blow. The motor started to run single phased but before any damage could result the other Fusetron fuses protecting the motor also blew and shut down the motor.

"My company stands behind its work. If the motor would have burned up, we would have rewound it without question. I know this would have cost us at least $200.

"What is important too, our reputation was saved and we have a satisfied customer. If the Fusetron fuses had not given us an opportunity to go back and do the job right before the motor was damaged, we would have been in a 'hot' spot."

DON'T RISK LOSSES! Using any other type of protective device may cost you far more than replacing them with Fusetron fuses.

For Loads above 600 and up to 5,000 amps . . . Use BUSS Hi-Cap Fuses They can be coordinated with Fusetron fuses on feeder and branch circuits to limit fault outages to circuit of origin.

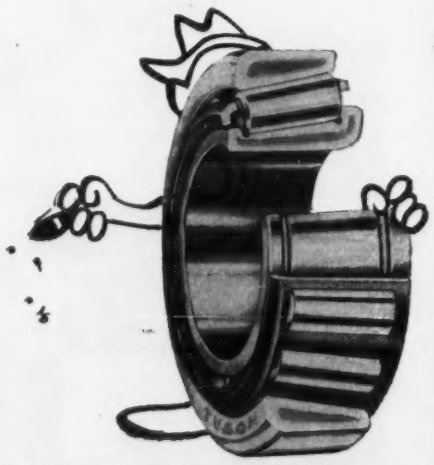
Write for . . . Bulletin FIS on Fusetron fuses
Bulletin HCS on BUSS Hi-Cap fuses

Bussmann Mfg. Division, McGraw-Edison Co., St. Louis 7, Mo.

Play Safe! Install FUSETRON Fuses and BUSS Hi-Cap Fuses

▲ For more details circle NED-44

The Authorized SKF



Spherical, Cylindrical, Ball, and Timken Tapered Roller

▲ For more details circle NED-4

METAL
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● For your obligation-free copy of Catalog No. 90 describing new designs . . . new economies . . . and new efficiencies in pallets, skids and boxes for unit load handling, write direct to The Union Metal Manufacturing Company, Canton 5, Ohio, or use the handy "Information Request Card" enclosed in this publication.

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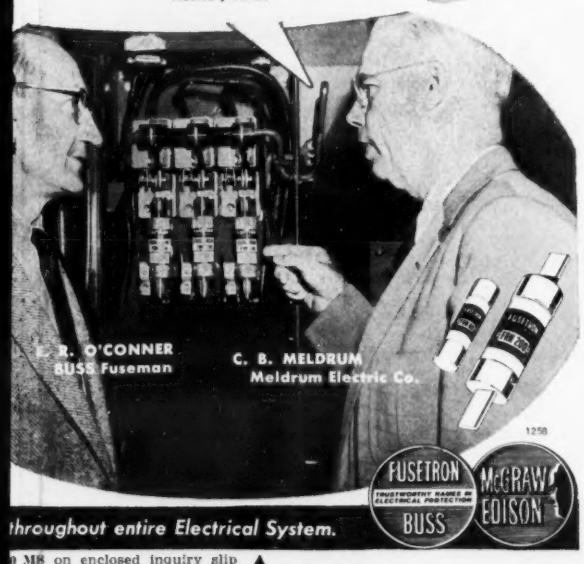
Material Handling Equipment

M8 on enclosed inquiry slip ▲

talled single-phased — ur reputation and $200 rewind job . . ."
C. B. Meldrum
MELDRUM ELECTRIC COMPANY
Houston, Texas



throughout entire Electrical System.

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F Bearing Distributor
tands behind every
bearing he delivers

He backs up his complete line of SKF bearings with on-the-spot service—and specialized experience with all types of bearing selection, installation and maintenance problems. To make sure your bearings run smoothly, just call him today.
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SKF®
SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.
Bearings
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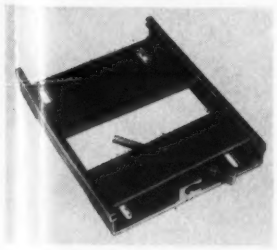
SLIDING MOTOR BASE
has quick release adjusting screw

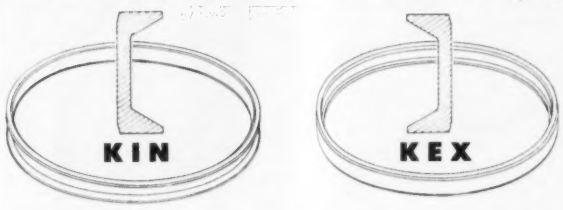


Easy and rapid movement of motor for take-up adjustment of Browning wide range variable pitch drives is facilitated by this sliding motor base. Adjusting screw can be quickly released for maximum movement of motor with only a few turns of the screw. Motor support plate is drilled at the factory to suit the application. Screw assembly is cadmium plated. The 18 x 14-in. Model MB284 base accommodates NEMA motor frames 182 to 284U, and 22 x 17¾-in. Model MB365 will take frames 286U to 365. Made by **Browning Mfg. Co.**, 1940 Browning Dr., Maysville, Ky.

▲ For more details circle **NED-442 M8** on enclosed inquiry slip ▲

TEFLON BOOT
used in conjunction with O-rings

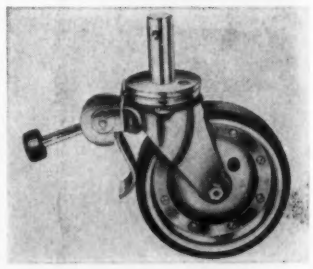
Positive sealing with low breakout friction is assured by the Kapseal Teflon boot, used in conjunction with standard O-rings. Boot is made in Kin and Kex styles,



the former being used where the friction surface is applied to the inside diameter of the seal, and the latter where the seal's outside diameter is the sealing surface. Sizes for the respective styles range from 0.125 to 7.750 in. ID and 0.250 to 7.750 in. OD. Typical uses are those where mechanism must operate the first time with minimum breakout friction, or a standby machine which must operate freely after long periods of inactivity. Sealing qualities are retained after more than 4 million cycles on a low pressure pneumatic cycling test. Made by **Minnesota Rubber Co.**, 3630D Wooddale Ave., Minneapolis 16, Minn.

▲ For more details circle **NED-443 M8** on enclosed inquiry slip ▲

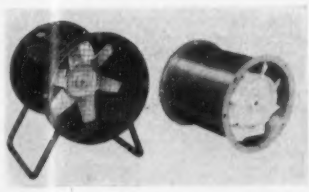
SHOE BRAKE CASTER
for scaffolds and racks



Shoe brake of this scaffold caster can be hand or foot operated. Side lever, operating on a simple cam principle, presses against shoe brake which exerts pressure on the face of the wheel and on the round top swivel plate at the same time. Caster is thus stopped from swiveling, and its wheel is stopped from turning. Unit is made for all types of scaffolds and racks by **Harris & Reed Mfg. Co.**, 2916 W. Jackson Blvd., Chicago 12, Ill.

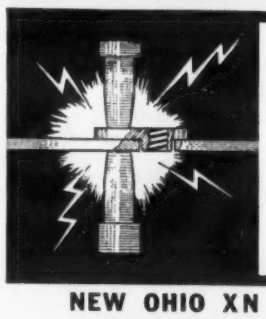
▲ For more details circle **NED-444 M8** on enclosed inquiry slip ▲

PRESSURE TYPE FANS
deliver 200 to 12,000 cfm of air



Capable of handling air, fumes, and light dusts encountered in industry or special machining or processing operations, Type DT Propellair tubeaxial fans have matched design motors and propellers. They are made with diameters of 8 to 24 in., with capacities from 200 to 12,000 cfm, from free air to 5 in. static pressure. Enclosed "all-weather," high temperature Class B, and explosionproof motors in single or polyphase types are offered for all standard voltages. Propellers are sparkproof magnesium-aluminum alloy with efficient airfoil design. Fan bodies are heavy gage rolled steel tubeaxial drums, and sizes above 8 in. have mounting flanges. Wire mesh guards, legs, venturi inlets, and other accessories are optional. For handling contaminated gas, belt-driven models are offered with the motor outside of the air stream. Corrosion resistant types are available. Made by **Robbins & Myers, Inc.**, Propellair Div., 1345 Lagonda Ave., Springfield 99, Ohio.

▲ For more details circle **NED-445 M8** on enclosed inquiry slip ▲



NEW OHIO XN SPOTWELD NUT
FOR FASTER AND BETTER JOINING OF YOUR PRODUCT COMPONENTS

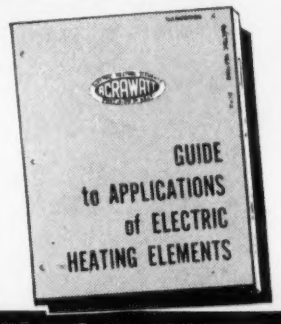
This nut which is applied by portable, rocker arm or press type spot welders becomes the primary fastener in your fastener assemblies. It offers these distinctive advantages:

- **LIGHTNING-FAST APPLICATION** (By spot welding)
- **PRIMARY FASTENER PERMANENTLY POSITIONED** (No retapping required)
- **SPLIT-SECOND ASSEMBLY OF PRODUCT COMPONENTS** (Made possible by pre-attached primary fastener)
- **SHIPMENT FROM STOCK**

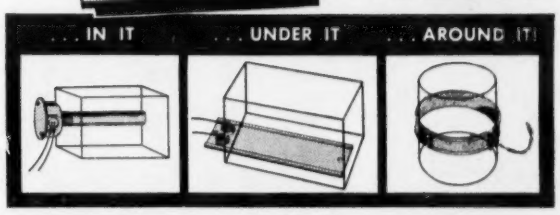
Samples and information furnished upon request.

The OHIO WELD FASTENERS Primary Fastener in Fastener Assemblies
THE OHIO NUT AND BOLT CO.
14 FIRST STREET BEREA, OHIO

▲ For more details circle **NED-446 M8** on enclosed inquiry slip ▲



FREE HANDBOOK tells you how to apply HEAT



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ELECTRIC HEATING ELEMENTS ACRAWATT "PRECISION IN HEAT"
8244
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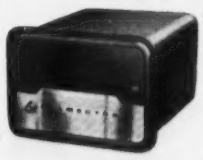
do you need manual or automatic flame-failure-protection?

Only you can decide — with help from a Wheelco field engineer if you wish which form of combustion safe-guard gives you the exact performance features you need. Wheelco's advanced designs, broad experience, and field organization extending across the U.S. and Canada help assure your satisfaction.

AUTOMATIC FLAME-OTROLS
Include purging, warm-up proving, pilot proving, low fire stabilization, ignition timing, and post-purging. Terminal available for alarm and control motor.



MANUAL START FLAME-OTROLS
Take over once oil- or gas-fired furnace, oven, etc., is started. As with automatic units, choices of sensing elements are available.

CONTROL CENTERS, TOO
Are designed and built by Wheelco providing pilot lights, alarms, etc., in a prewired package.

BARBER-COLMAN COMPANY
Dept. L, 1514 Rock Street, Rockford, Illinois

▲ For more details circle **NED-448 M8** on enclosed inquiry slip ▲

FREE LATEST STAYNEW FILTER INFORMATION

Pipe Line Filter Bulletin 200

Tells how Dollinger exclusive "Double Action Principle" removes all dirt, rust, or other foreign matter in air or gas lines at pressures to 10,000 psi. Gives data and specifications on all models.

Call your local Dollinger representative or write Dollinger Corporation, 49 Centre Park, Rochester 3, N. Y.

STAYNEW FILTERS — DOLLINGER

FILTERS FOR EVERY INDUSTRIAL NEED

▲ For more details circle NED-449 M8 on enclosed inquiry slip ▲

MECHANIZE all Scrubbing Operations into 1

(Powder Dispenser and Level Cable Wind are accessories)

with a **COMBINATION SCRUBBER-VAC!**

This single unit, *Finnell's 213P Electric Scrubber-Vac* for large-area floors, applies the cleanser, scrubs, flushes, and picks up (damp-dries the floor) — *all in one operation!* No switches to set for *fast* or *slow*. *Self-propelled* . . . 26" brush spread. Cleans up to 8,750 sq. ft. per hour (and more in some cases), depending upon floor condition and congestion. Available on lease or purchase plan. *Finnell* makes a full range of sizes, and *gasoline* or *propane* as well as *electric* models. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 5512 East St., Elkhart, Ind.

FINNELL SYSTEM, INC. *Originators of Power Scrubbing and Polishing Machines* — FINNELL — BRANCHES IN ALL PRINCIPAL CITIES

▲ For more details circle NED-450 M8 on enclosed inquiry slip ▲

free DATA MANUAL

for low cost **DRYING BAKING HEATING CURING**

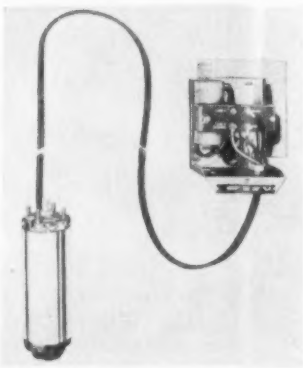
Degreasing, Metal Prep

Describes how driQuik infra-red heat generators solve production problems in hundreds of applications. Shows how heating units and ovens of all sizes and shapes can be built at low cost by your personnel or by us to your specifications. Gives details of our free field testing service right in your own plant. Shows how driQuik infra-red generators save money in operation, because they have NO BULBS OR SOCKETS TO BURN OUT. Write for your copy of Data Booklet D117 today.

driQuik DIVISION — DRY CLIME LAMP CORP. GREENSBURG, INDIANA

▲ For more details circle NED-451 M8 on enclosed inquiry slip ▲

SUBMERSIBLE MOTORS
use water to cool and lubricate



Minimum thrust - carrying capacity of 15 MT Series of submersible pump motors is 175 lb. Built to NEMA specifications, the medium thrust motors have a gimbal ball leveler which distributes pump thrust on water-lubricated bearings in the motor. Stator parts exposed to water are stainless steel, and windings are hermetically sealed. Water is also used for cooling. A three-lead cable places control components above ground for accessibility. Made by **Franklin Electric Co.**, 346 E. Spring St., Bluffton, Ind.

▲ For more details circle NED-452 M8 on enclosed inquiry slip ▲

FLEXIBLE CONNECTORS
high strength units stop vibration and compensate for misalignment

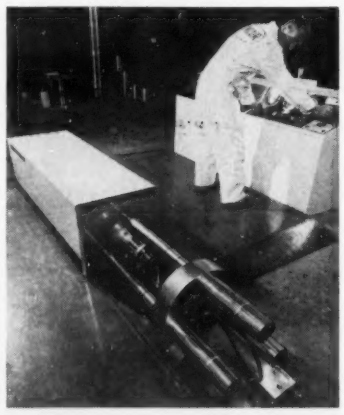
Line of Flex-Hose general purpose flexible metal connectors lessen the transmission of vibration and pulsations into rigid piping from pumps, compressors, air

conditioners, and other equipment. They also compensate for misalignment and minimize strain on piping. The connectors are made of corrugated seamless tubing, protected and reinforced by an outer braid. Maximum steady working pressures at 70° F vary with size up to 1700 psi. Operating temperatures can be as high as 750° F, depending upon materials used. Pressure ratings can be increased up to 75 per cent by use of multiple braiding.

Series B Flex-Hose has bronze tubing, single bronze braiding, and brazed fittings, and is offered for 12 pipe sizes from 1/4 to 4-in. ID in lengths from 8 to 27 in. Series S has steel tubing, woven steel wire braid, and hot-dip galvanized fittings, for seven pipe sizes from 5 to 16-in. ID, in stock lengths from 31 to 72 in. Four end fitting types are offered. Made by **Korfund Co.**, 48-19H 32nd Place, Long Island City 1, N. Y.

▲ For more details circle NED-453 M8 on enclosed inquiry slip ▲

FORMING MACHINE
high velocity, high power unit for forging, forming, and extruding



Seldom employed law of pneumatics is used by the Dynapak forming machine to develop high piston velocity and a high energy rate which can be applied to forging, forming, extruding, compacting, shearing, and blanking of metals and other materials. Its rapid action is safely controlled from an operating console.

Technique employed enables many metals, when worked at high velocities, to flow as if they were plastic. It extrudes parts with a web thickness as small as 0.01 in.; forges to zero draft angle; and produces smooth, close tolerance surfaces. Material is forced into every crevice of the die by the high velocity and pressure.

Machine is made in three standard sizes. Model 600 with a 6-in. bore produces 40,000 ft-lb of energy at velocities exceeding 200 fps. Stroke is 12 in. Model 1200 has a 12-in. bore and delivers 160,000 ft-lb, and Model 1800 has an 18-in. bore and 1,500,000 ft-lb. Smallest model is only 2 x 2 x 9 ft, weighs 3000 lb, and may be bench mounted with only four bolts. Floor loading is almost nil. Energy developed is absorbed in working the material and by the dynamic reaction frame. Made by **General Dynamics Corp.**, Convair Div., 3165 Pacific Highway, San Diego 12, Calif.

▲ For more details circle NED-454 M8 on enclosed inquiry slip ▲

HIGH VISIBILITY—RUGGED CONSTRUCTION

Lite-TUFF boxes are made from clear, rugged Tenite II and have stainless steel hinges. Standard boxes available in many sizes and compartment arrangements. Uses innumerable!

Send for Plot Plan Sheets which show specifications of Standard Boxes.

SHOE FORM CO. INC.

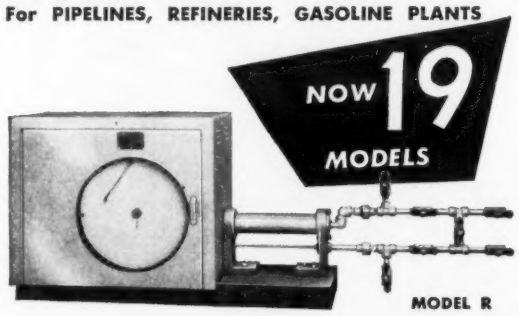
Dept. B-128 **Auburn, New York**

▲ For more details circle NED-455 M8 on enclosed inquiry slip ▲

ARCCO-Anubis

LIQUID GRAVITOMETER

For PIPELINES, REFINERIES, GASOLINE PLANTS

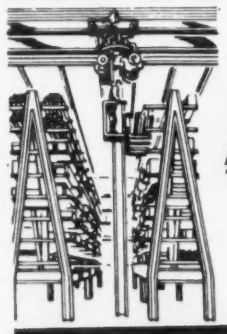


This ruggedly built instrument of laboratory accuracy is ideal for quick checking and for continuous recording of Specific Gravity of liquids under line pressure. Changes in Specific Gravity of sample are recorded with a very minimum of time lag. Foreign liquids and gases are automatically purged from sample. No moving joints or stuffing boxes to cause friction or leakage. Temperature corrected, this precision instrument is adaptable to high pressures. Hundreds are in daily use in plants and refineries of major companies. Available in 19 Models for Recording, Signalling, Transmitting and Controlling. Send for Bulletin 111R-3.

AMERICAN RECORDING CHART CO. — AVAILABLE FOR EARLY DELIVERY

7142 E. Condor St., Los Angeles 22, Calif.

▲ For more details circle NED-456 M8 on enclosed inquiry slip ▲



use your Air rights . . .

INCREASE HANDLING EFFICIENCY, SPEED MATERIAL MOVEMENT, SAVE SPACE, TIME, MONEY WITH

TRAK-RAK®

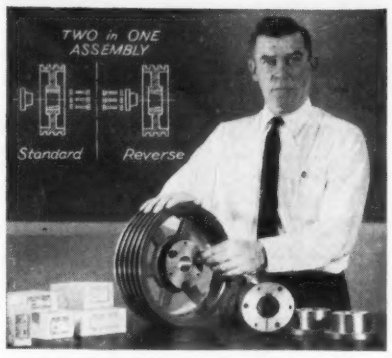
A TRAK-RAK System saves valuable floor area by permitting vertical material storage and handling, yet provides faster, safer in-and-out of storage handling than on the floor operation. TRAK-RAK gives you better inventory and parts control, lowers handling costs, improves material delivery. Over 200 TRAK-RAK systems installed in companies like Alcoa, Carson Pirie Scott & Co., Chain Belt Co., Du Pont, Westinghouse, General Electric, etc.

Write for complete Gib Crane Catalog showing complete line—

CTC — CHICAGO TRAMRAIL CORPORATION 1310 S. Kostner Avenue • Chicago 23, Illinois

▲ For more details circle NED-457 M8 on enclosed inquiry slip ▲

When is a bushing worth the price of a sheave?



When it's "Sure-Grip," of course. As many as 32 "Sure-Grip" bushings will fit the sheave illustrated above. Each permits the use of the sheave on a shaft of different size. Not only that, but in almost every case "Sure-Grip" bushings are drilled and tapped to permit sheave mounting from either side. Add to this flexibility the extra performance that's built into Wood's sheaves and the matchless quality of Wood's matched "Sure-Grip" V-belts and you have an outstanding solution to your drive problems. For information regarding specific drive applications and your copy of Bulletins No. 599 (sheaves) and 3100 (belts), write:

T. B. WOOD'S SONS COMPANY
CHAMBERSBURG, PENNSYLVANIA
ATLANTA • CAMBRIDGE • CLEVELAND • DALLAS • NEWARK

▲ For more details circle **NED-458 M8** on enclosed inquiry slip ▲

MILLERS FALLS TOOLS SINCE 1868

• Versatile!
• Powerful!
• Trouble-free!
New No. 777
IMPACT WRENCH

½" square drive

This new, improved impact wrench out-performs and out-lasts any electric tool in its class. Advanced design features include beryllium copper contacts and terminals, unit thrust bearings, and a new, three-planet gear system. Complete tool weighs only 7¼ lbs., delivers 2,000 impacts per minute, and develops 100 ft. lbs. torque for high-speed nut running, screw driving, and for many other assembly and maintenance operations.

Write for free, fully descriptive folder.

MILLERS FALLS COMPANY
Dept. NED-5, Greenfield, Mass.

▲ For more details circle **NED-459 M8** on enclosed inquiry slip ▲

ANOTHER *PANNIER* MASTER MARKER!

PANNIER'S INSPECTORS' HAMMERS WEAR LONGER

Many styles and sizes for metal marking. Letters, numbers or symbols on either or both ends; interchangeable type heads available.

Write for data.

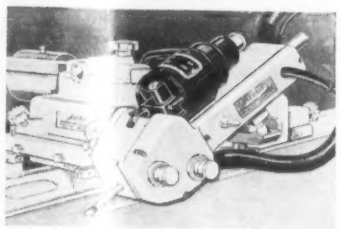
MONEY-SAVING FEATURES:
• Sturdy, balanced construction
• Long-lasting tool steel head
• A style for every (any) need
• Sharp, clean marking

BIRTHMARKED MATERIALS

MARKING DEVICES
THE PANNIER CORPORATION
301 SANDUSKY STREET PITTSBURGH 12, PA.
Offices: Los Angeles • Cleveland • Chicago • Philadelphia • Birmingham

▲ For more details circle **NED-460 M8** on enclosed inquiry slip ▲

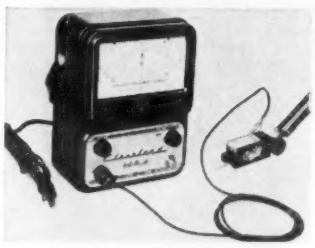
AUTOMATIC TORCH
cutting unit uses arc and air



Among the uses for the Model Q-3 automatic Arcair torch is the preparation of joints for welding. An electric arc melts metal, and a jet of compressed air blows away the molten metal. Its head has a mechanism which feeds consumable copper-coated carbon graphite electrodes as required and supplies a jet of air. Head is mounted on a tractor, permitting straight line or circular travel at a predetermined speed. Head can also be removed from the tractor and mounted on positioning equipment. Torch prepares grooves and bevel contours at the welding location by setting the head at any angle. Electrodes from 3/16 to ⅜ in. can be handled, and the tractor has a 0 to 180-ipm speed range. Made by **Arcair Co.**, Box 431, Lancaster, Ohio.

▲ For more details circle **NED-461 M8** on enclosed inquiry slip ▲

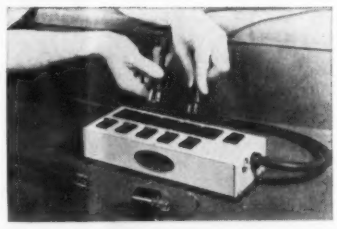
TRANSISTORIZED GAGE
measurements read on three scales



Three color-coded scales of the Indi-Ac Jr. transistorized electronic gage provide accuracy and range from less than 0.000020 to 0.020 in. It operates on a battery or alternating current power source, weighs 68 oz, and measures 5⅜ x 7 x 3¼ in. When used on line current, its battery is being recharged. The T-210 gage head is protected from oil, grit, and magnetic fields. It mounts on any suitable height gage or comparator stand, fixture, or machine. Gage tip can be made to gage from top or bottom of a surface. Zero points and readings are transferable from one scale to another. Made by **Cleveland Instrument Co.**, 6220 E. Schaaf Rd., Cleveland, Ohio.

▲ For more details circle **NED-462 M8** on enclosed inquiry slip ▲

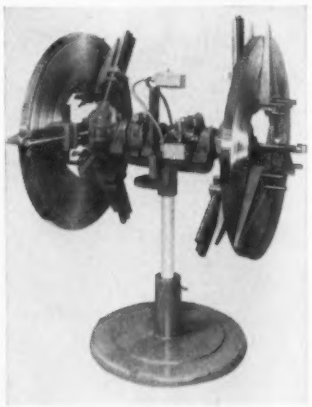
MULTIOUTLET BOX
circuits are protected by breaker



Five overload - protected safety-grounded outlets are provided by this electric plug-in box which is equipped with a 6-ft power cord and a self-grounding three-prong plug, as well as an adapter with a grounding lead for use in standard two-blade sockets. Each of the five outlet sockets has a 15-amp on-off switch and accepts either two or three-prong plugs. The instant-reset circuit breaker trips at loads over 15 amp to protect equipment plugged into unit. Made by **Arthur S. LaPine & Co.**, 6001 S. Knox Ave., Chicago 29, Ill.

▲ For more details circle **NED-463 M8** on enclosed inquiry slip ▲

DOUBLE STOCK REEL
for high speed press room use



One side of this self-centering double stock reel can be loaded while the other side is unwinding, thus obtaining maximum productivity from the reel and the equipment with which it is used. It is available with either magnetic or standard friction drag brakes. Quick-adjusting forks are standard equipment. Smaller of two models handles material up to 10 in. wide, a maximum outside coil diameter of 44 in., and up to 500 lb on each side. Larger model takes coils up to 1000 lb, with a maximum diameter of 48 in. and 13 in. wide on each side. Both have a self-centering core from 6 in. minimum up to 24 in. Made by **Durant Tool Co.**, Thurbers Avenue, Providence, R. I.

▲ For more details circle **NED-464 M8** on enclosed inquiry slip ▲

INSURE *Proven Quality* with JONES PLUGS AND SOCKETS

P-306-CCT Plug, Cable Clamp in Cap.

Jones Series 300 illustrated. Small Plugs & Sockets for 1001 Uses. Cap or panel mounting.

S-306-AB Socket with Angle Brackets.

• Knife-switch socket contacts phosphor bronze, cadmium plated.
• Bar type Plug contacts brass, cadmium plated, with cross section of 5/32" by 3/64".
• Insulation molded bakelite.
• All Plugs and Sockets polarized.
• Metal Caps, with formed fibre linings.
• Made in two to 33 contacts.
• For 45 volts, 5 amperes. Efficient at much higher ratings where circuit characteristics permit.

Ask for Jones Catalog No. 22 showing complete line of Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write or wire today.

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

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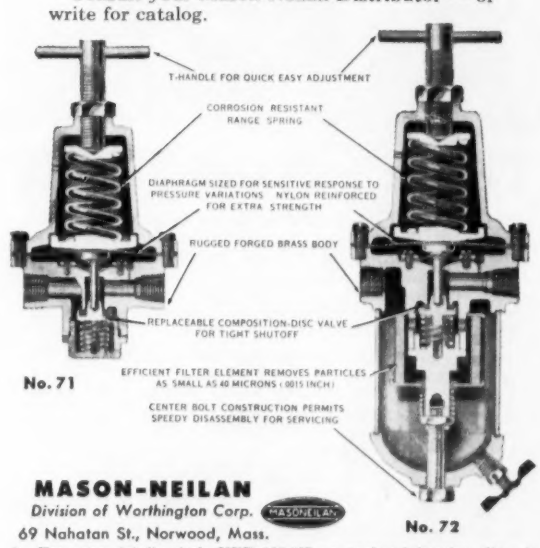
Safe, Sure Way to Control Air Pressure

M-N Nos. 71 and 72 Reducing Valves

For accurate control of air pressure for small air-operated devices like tools, chucks, automatic oilers, spray painters, etc. Trouble free, long lasting.

Consult your Mason-Neilan Distributor — or write for catalog.



MASON-NEILAN
Division of Worthington Corp.
69 Nahatan St., Norwood, Mass.

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PLASTIC SPACERS WASHERS & ROLLERS

do a better job for less

The current trend away from older traditional materials to NYLON, *HI-FLEX, POLYETHYLENE, BUTYRATE and VINYL for spacers and rollers attest to the superiority of these plastic materials in this application. Plastic spacers cost less, look better and are far more durable. Noise and friction is reduced, rust danger eliminated and deterioration minimized.

PIPCO LEADS THE FIELD WITH OVER 3,000 SMALL INDUSTRIAL STOCK PARTS

FREE SAMPLES & PRICES ON REQUEST

*Plastiglide's new high density polyethylene material

small parts with a big reputation

PIPCO INTERNATIONAL CORPORATION
1757-F STANFORD STREET • SANTA MONICA, CALIFORNIA

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AMEs

Masters of Measurement

PORTA-CHECK®
A transistorized comparator for fast, accurate measurement to .00001".

200 SERIES
One of four sizes; made to AGD specifications.

For more than half a century, Ames measuring instruments have been regarded as the finest available. Wherever precision is *really* important . . . you'll find Ames indicators, gauges, micrometers and comparators on the job.

Representatives in Principal Cities

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34 Ames Street, Waltham 54, Mass.
Canadian Office — B. C. Ames Co., 45 Oriole Parkway, Toronto
MANUFACTURERS OF MICROMETER DIAL INDICATORS AND GAUGES
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TRANSPARENT FLEXIBLE INDUSTRIAL HOSE

TYGON *flexible plastic* TUBING

Tygon Flexible Plastic Tubing in bore sizes to 3" makes the ideal industrial hose for many applications because it offers advantages not found in any other type. It combines glass-like clarity with true flexibility and resistance to oils, greases and chemicals. Physically tough, it ruggedly resists abrasion, and withstands repeated flexing and rough usage.

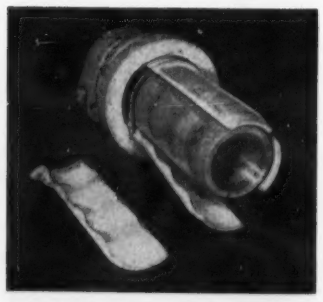
Tygon's many tubing formulations provide types to safely handle a wide and varied range of materials—from sensitive high purity drugs to corrosive acids. Tygon Tubing installs quickly—cleans easily. Fifty-five bore sizes from 1/16" to 3" provide a size for virtually every tubing or hose need. 406-E

Write today for Bulletin T-97 for complete technical data.

Plastics and Synthetics Division
U. S. STONEWARE
AKRON 9, OHIO
▲ For more details circle **NED-469 M8** on enclosed inquiry slip ▲

Dilts LIGHTWEIGHT EXPANDING CHUCK

Cuts Roll Shaft-up Time by 50%



REDUCES CORE DAMAGE

HOLDS WITHOUT SLIPPING

Easy to Handle • Simple to Operate • Prevents Damage

. . . chuck holds roll concentrically—grips core on inside and transmits full braking torque without slippage

Standard Sizes—3"—3½" and 4" core I.D. to fit 1⅛" thru 2 3/16" round shafts and 1¼" square shafts. (High Tensile Aluminum)

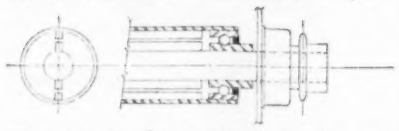
5"—6" core I.D. to fit 2 3/16" thru 3 15/16" round shafts. (Malleable Iron)

Write for specification sheet 102A or place order direct.

THE BLACK-CLAWSON COMPANY
DILTS DIVISION • FULTON, N. Y.
▲ For more details circle **NED-470 M8** on enclosed inquiry slip ▲

SLIP-TYPE CONVEYOR ROLLERS
fluid filled for stop and run use

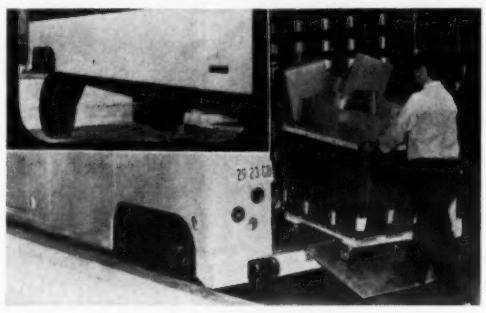
Material carried on a moving powered roller conveyor can be stopped for assembly, inspection, labeling, or packaging while the conveyor continues to run through the use of this fluid filled roller. No damage to the conveyor or the material results, even on long stoppages. Rollers can be limited in torque transmission to only the amount actually required to maintain material flow. Material can thus be held back when necessary with very little effort. Made by **Harry J. Ferguson Co.**, West Avenue, Jenkintown, Pa.



▲ For more details circle **NED-471 M8** on enclosed inquiry slip ▲

ELEVATING TRAILER
body raises or lowers for loading from ground level to 52-in. height

Body of this Thompson Leveloder trailer can be raised or lowered to match the height of docks, platforms, car doors, or highway trucks. It can even be loaded

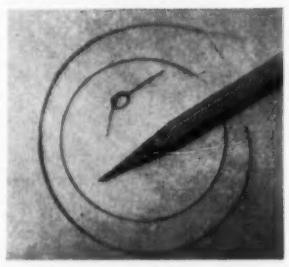


or unloaded from ground level as the body can be lowered to the ground or raised to a 52-in. level. Hydraulic cylinders and a 7½-hp gasoline engine driven power unit mounted on the king pin support platform effect the operation. The trailer can be towed by any tractor or semitractor.

Available in van or flatbed body styles, trailer has a steel frame and an Alcoa aluminum body. Size is 27½ ft overall, with a 20-ft body length. It rides at a conventional 24-in. height over the road and has a capacity of 5 to 10 tons in full or semitrailer styles with single or tandem wheels. Made by **Thompson Trailer Corp.**, 2 Old Court Rd., Pikesville 8, Md.

▲ For more details circle **NED-472 M8** on enclosed inquiry slip ▲

THERMOCOUPLES
subminiature type have metal sheaths



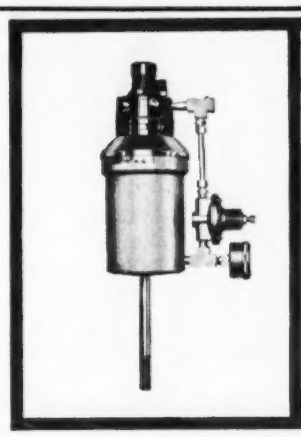
Lightweight, fast-responding, subminiature thermocouples are ceramic-insulated from their high temperature metal sheath. The temperature sensing devices are resistant to corrosion, abrasion, and erosion, and are readily formed as shown in the photograph. Diameters range from 0.020 to 0.040 in. OD in two-wire type. Photo shows 0.020 and 0.032-in. OD types, priced at $4.85 and $4.50 per foot, respectively. They are stocked in several sheath materials and most conductor combinations. Other materials are available. Made by **Pyro-Electric, Inc.**, Dept. 12, Box 232, Barrington, Ill.

▲ For more details circle **NED-473 M8** on enclosed inquiry slip ▲

ELECTRIC HOISTS
in ½, 1, and 2-ton capacities

Three new models of the CM Lodestar electric hoist include a 2-ton Model R which has a lifting speed of 8 fpm. Model L with 1-ton capacity and the ¼-ton Model J have respective lifting speeds of 16 and 32 fpm. Line now provides a greater selection of lifting speeds and capacities ranging from ⅛ to 2 tons. Made by **Columbus McKinnon Chain Corp.**, Chisholm-Moore Hoist Div., Tonawanda, N. Y.

▲ For more details circle **NED-474 M8** on enclosed inquiry slip ▲



CONOFLOW CYLINDER ACTUATOR . . . . . shows you the way to AUTOMATION

Conoflow Series 50 Cylinder Conomotor Actuator affords automatic throttling control for many types of process regulating equipment previously limited to hand control. The Cylinder Conomotor is a powerful pneumatic servomechanism capable of following the exact signal outputs of modern electronic and pneumatic instruments.

It has found wide industrial application for automatic control of numerous types of valves, motor driven speed changers, proportioning pumps, flow regulators, and many electrical systems components such as rheostats, autotransformers and potentiometers.

Investigate the possibility of using the Cylinder Conomotor with your processing equipment. Write for Bulletins B-50-3 and EB-3, today.

Cono-Controls® FOREMOST IN FINAL CONTROL ELEMENTS

CC718

CONOFLOW CORPORATION
SUBSIDIARY OF WALWORTH COMPANY
2100 ARCH STREET • PHILADELPHIA 3, PA.
▲ For more details circle **NED-475 M8** on enclosed inquiry slip ▲

NEW Color-Coded T&B Compression Connector

Cuts Lugging, Splicing Costs in half

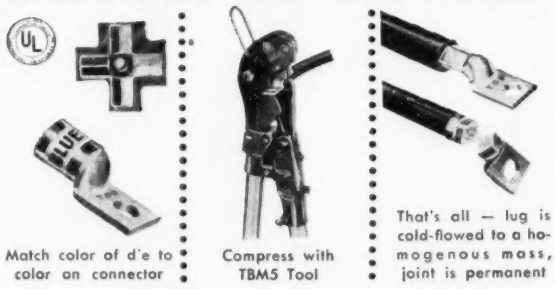
Color-Coding of dies and connectors speeds Compression, assures Permanent joints

Long accepted as the best way to lug or splice conductors, T & B Method Compression Connectors are now available color coded.

A new tool, the TBM5 with color coded dies speeds compression time to give you lowest installed cost.

The connectors are available in one and two bolt hole lugs and two-way connectors from #8 to 1000MCM AWG. The TBM5 installs a wide range of conductors from #8 to 250MCM AWG.

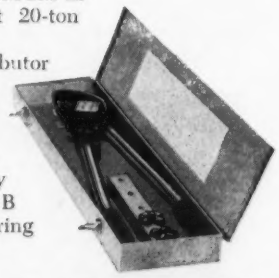
HERE'S HOW THE TBM5 WORKS



Here's what the new T & B Method means to you! First, only one tool is needed from #8 to 250MCM. Second, you get a permanent, high conductive joint every time, and, finally, your splicing and lugging operations are performed faster. Dies snap in, snap out, and the lightweight strong TBM5 is built for a life time of use.

300MCM to 1000MCM installs with compact 20-ton Hydraulic Tool.

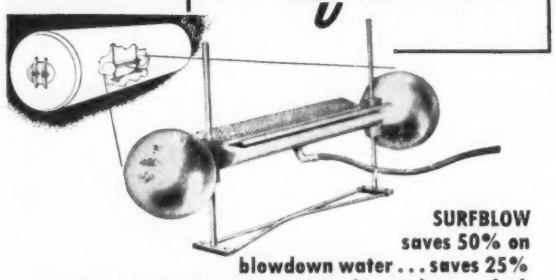
Your T & B distributor has this complete line in stock. Be sure to ask for a demonstration. Write today for a compressed T&B connector, and ordering information.



THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street • Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada
MANUFACTURERS OF
FINE ELECTRICAL FITTINGS SINCE 1898 T62
▲ For more details circle **NED-476 M8** on enclosed inquiry slip ▲

For Sensational Savings in the Cost of Generating Steam

SurfBlow®
THE FLOATING SKIMMER



SURFBLOW saves 50% on blowdown water . . . saves 25% on water treatment costs . . . amazing savings on fuel.

SURFBLOW removes boiler water impurities at point of greatest concentration. Removes more solids than conventional methods. Steam is cleaner . . . less carryover.

Nothing to wear out, no moving parts, no maintenance. Stainless Steel Skimmer. Easy to install. Operation completely automatic.

Ask for case histories. *Write for bulletin today*

BOILER SPECIALTIES CORPORATION 512-Box 485 GARY, INDIANA

For more details circle NED-477 M8 on enclosed inquiry slip

How to make "off-the-shelf" units do special filtering jobs

Save time, money and headaches by using Purolator standard units to solve your filter problems — no matter how specialized. Wide range of requirements covered!

ACIDS	FATS	PAINTS
AIR	FOODS	PASTES
ANTIBIOTICS	FUEL	PETROCHEMICALS
ANTIFREEZE	GASES	PIGMENTS
BEVERAGES	GASOLINE	REFRIGERANTS
CATALYSTS	GREASE	SOLVENTS
COATINGS	HYDRAULICS	SYNTHETICS
CONFECTIONS	INTERMEDIATES	SYRUPS
COOLANTS	LACQUERS	TOOTHPASTE
COSMETICS	LIQUORS	VARNISHES
CUTTING FLUID	MEDICINES	VEHICLES
DETERGENTS	OILS	VITAMINS
ESSENTIAL OILS	OINTMENTS	WATER
		WAXES

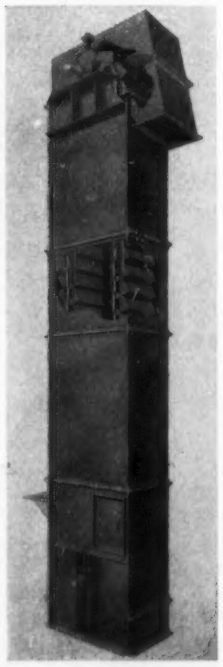
Filtration For Every Known Fluid

PUROLATOR PRODUCTS, INC.
Rahway, New Jersey and Toronto, Ontario, Canada

WRITE for Industrial Filter Catalog, or send schematic drawing and details for specific recommendation. Address Purolator Products, Inc., Rahway, N. J.

For more details circle NED-478 M8 on enclosed inquiry slip

Lift Your Bulk Materials Economically with . . . Webster BUCKET ELEVATORS



WEBSTER Bucket Elevators can be supplied in practically any capacity and height. Made in centrifugal, perfect or gravity discharge, continuous bucket, and super capacity types. Buckets can be furnished malleable iron, duramal or steel mounted on chain or belt.

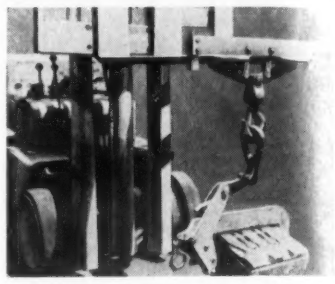
WEBSTER Elevators are designed especially for the characteristics of the materials to be handled. All components are manufactured and assembled in Webster plant in Tiffin, Ohio.

Write for Catalog BE-55.

Webster MANUFACTURING, INC.
DEPT. NE-128 TIFFIN, OHIO
BULK MATERIALS HANDLING EQUIPMENT
Offices in all Principal Cities

For more details circle NED-479 M8 on enclosed inquiry slip

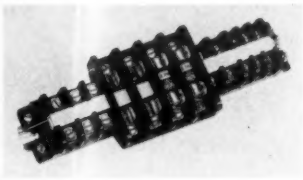
FORK LIFT ATTACHMENT attaches on industrial trucks



Lifting and transporting of heavy loads such as motors or dies is simplified by this Automatic Safety Lock fork lift attachment. This forged unit has a safety swivel hook and is slipped onto the truck forks. Two knife-edge levers grip the forks securely as the load is applied, but it can be slipped off easily when load is released. Made by **Merrill Brothers**, Artic Street, Maspeth, N. Y.

For more details circle NED-480 M8 on enclosed inquiry slip

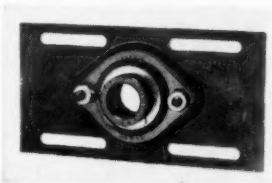
FUSIBLE TERMINAL BLOCK rated at 30 amp and 600 v



Fuse protection for solenoids and other single or three-phase loads is provided by the Type H fusible terminal block. Made up of individual sectionalized blocks assembled on a mounting channel with a clamp at each end, it will accept any 13/32-in. diameter by 1½-in. long ferrule type fuse. Block can be combined with four different types of terminal blocks. It is offered in factory assembled units or in kit form for user assembly. Made by **Square D Co.**, 4041 N. Richards St., Milwaukee 12, Wis.

For more details circle NED-481 M8 on enclosed inquiry slip

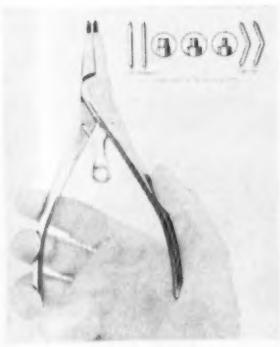
BALL BEARING TAKE-UP two sizes cover eight shaft sizes



Mounted by either guide or bolt methods, this ball bearing take-up of pressed steel can accommodate misalignment without adjustment. Built-in self-alignment of the ball bearing will offset differences in take-up on either side of the shaft. It is available in two basic sizes covering eight different shaft dimensions. Bearing is sealed and permanently lubricated, and has a self-locking collar that makes possible easy installation. Made by **Fafnir Bearing Co.**, 37 Booth St., New Britain, Conn.

For more details circle NED-482 M8 on enclosed inquiry slip

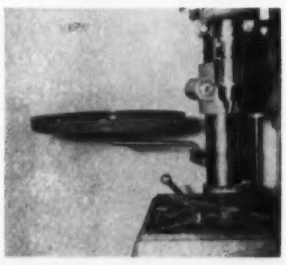
SNAP RING TOOL features replaceable tips



Replaceable straight and angle tips of various sizes enable this snap ring tool to handle a wide range of snap ring sizes in assembly and repair operations. One tool can be used for various size rings by merely changing the tips. Also, tool need not be discarded when tips break or wear. The double - end tips are merely reversed or replaced. Made by **Milbar Corp.**, 1900 Euclid Ave., Cleveland 15, Ohio.

For more details circle NED-483 M8 on enclosed inquiry slip

DRILL PRESS TRAY holds workpieces, tools, oilers



This 12-in. diameter, ¾-in. deep circular tray is attached to drill press post by means of an adjustable clamp and can be raised or lowered to desired height for holding small workpieces, oil cans, drills, and wrenches. Made of 16-gage steel, tray is painted gray with a black-plated pivot bar. Tray can be pushed away or drawn toward the operator, as well as revolved like a lazy susan. Price is $4.85. Made by **B & I Mfg. Co.**, Burlington, Wis.

For more details circle NED-484 M8 on enclosed inquiry slip

Microsize FLEXLOC locknuts fasten small assemblies with complete reliability

Microsize FLEXLOC locknuts, one-piece and all-metal, meet designers' needs for tiny precision nuts that retain strength and holding power in the smallest assemblies—servomechanisms, electronic and electrical equipment, and many other miniature devices. They are much smaller and lighter than regular FLEXLOCS of the same nominal diameter. They are not affected by moisture, dryness or oil; are not shaken loose by vibration; have no nonmetallic inserts to come out; stay put anywhere on a threaded member as soon as the locking threads are fully engaged.

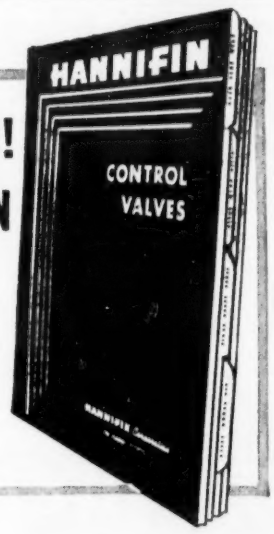
Sizes 0-80 through 4-48 in alloy steel, stainless steel, brass and aluminum are available through SPS industrial distributors. Ask the one nearest you for complete details. Or write Flexloc Locknut Division, STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

We also manufacture precision titanium fasteners / *write for free booklet*

SPS Jenkintown • Pennsylvania
Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co. • National Machine Products Co. • Nutt-Shel Co. • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

For more details circle NED-485 M8 on enclosed inquiry slip

DIMENSIONS! APPLICATION DATA! DISCOUNTS! PRICES!



The Air Control Valves you need are in this catalog

- Poppet-Type
- Rotary Disc
- Sliding Disc
- Speed Control

HANNIFIN
Hannifin Company, 527 S. Wolf Road, Des Plaines, Illinois
(HANNIFIN COMPANY is a division of PARKER-HANNIFIN CORPORATION)

For more details circle NED-486 M8 on enclosed inquiry slip

INDUSTRIAL WIRE CLOTH

• REYNOLDS WIRE DIVISION of the National-Standard Company produces industrial wire cloth in standard and special weaves in a complete range of meshes, metals, alloys and coatings . . . in all normally required widths.

Write to Reynolds for specific information on the products we make and on our facilities for developing special wire cloth to fit your specifications.

Reynolds Wire Division • Dixon, Illinois

NATIONAL STANDARD

For more details circle NED-487 M8 on enclosed inquiry slip

Your Idea-Sparker on Electric Cable Control...

Write for your free copy of Gleason Catalog, Industry's most complete "Idea Book" on profitable application of Gleason Spring Reels, Motor Reels, Hand Reels — for electric cable, cord, and hose Control for all equipment in motion. Or write for engineering suggestions.

Gleason Reel Corp
738 N. Plankinton Ave., Milwaukee 3, Wis.
SPRING REEL HEADQUARTERS FOR ALL INDUSTRY

▲ For more details circle NED-488 M8 on enclosed inquiry slip ▲

DIGITAL RECORDER
for production, uses punched tape

The number of units produced during any preselected time interval are readily counted by this digital recorder. Operated by electrical impulses from any conventional contact device, recorder permanently records on punched paper tape. Periods of peak production efficiency and machine down time are easily determined. Standard time intervals are 5, 15, 30, and 60 min. Other intervals are available. Made by **Fischer & Porter Co.**, 935 Jacksonville Rd., Hatboro, Pa.

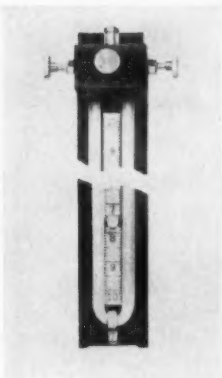
▲ For more details circle NED-490 M8 on enclosed inquiry slip ▲

SPARKLESS BRUSHES
made of phosphor bronze wire

By eliminating sparking and static electricity, these phosphor bronze wire brushes can be used where sparks may be dangerous or undesirable, such as in atmospheres containing explosive dust or gases, or where gasoline or other explosive material may be present. Brushes are available in standard 4 and 6-in. cup, medium and wide face wheel and in straight and bent handle scratch types. Special brushes can be supplied. Made by **Anderson Corp.**, 1028 Southbridge St., Worcester 10, Mass.

▲ For more details circle NED-491 M8 on enclosed inquiry slip ▲

U-TYPE MANOMETER
has integral bypass manifold

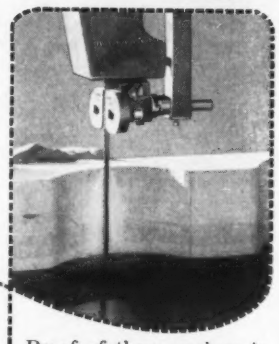


Use of this U-type manometer in flow measurement and other differential pressure applications is facilitated by its integral three-valve bypass manifold. The head has a shut-off valve for each of the two pressure lines, and a bypass valve in the connecting passage. Operation of valves simplifies cleaning and servicing. Two available models are a single-cleanout type with a formed glass U-tube and a double-cleanout unit with two straight glass tubes connected by a passage in the removable cleanout head. There are eight sizes of the former with ranges of 6 to 50 in. and 16 models of the latter with 6 to 130-in. ranges. All have maximum working pressure of 250 psi and are available with wetted metal parts of steel, brass, or stainless steel. Made by **King Engineering Corp.**, Box 690, Ann Arbor, Mich.

▲ For more details circle NED-492 M8 on enclosed inquiry slip ▲

25% to 40% faster cutting

Hundreds of industrial plants report actual increased sawing production of 25% to 40% and a higher quality work with use of Foley precision saw filing equipment. They get longer saw life, less breakage and lower maintenance costs. One firm reports an annual saving of $350.00.



if you use saws, send for this FREE BOOK

Proof of these savings is in a helpful 56 page book we have for you. This free book is based on many years' use of Foley Saw Filers in thousands of plants. It contains pictures and detailed data on how these firms save money—how you can benefit. Request Manual No. 100; no obligation.

FOLEY MANUFACTURING CO.
3323 V. E. 5th St. • Minneapolis 18, Minn.

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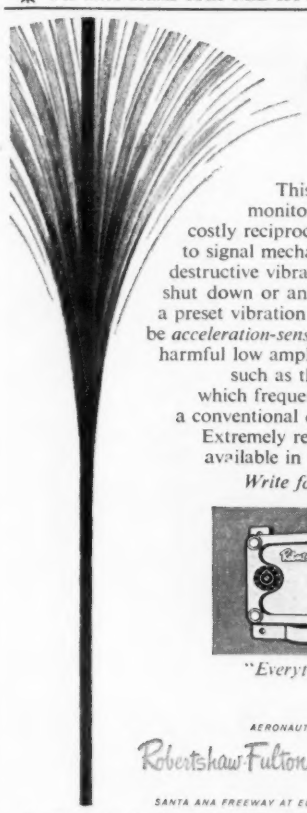

END VIBRATION MENACE!

This unique new "vibration-level monitor" stands constant guard over costly reciprocating and rotating equipment to signal mechanical malfunction the instant destructive vibration starts. Machinery can be shut down or an audible alarm sounded once a preset vibration level is exceeded. Designed to be *acceleration-sensitive*, VIBRASWITCH can detect harmful low amplitude high frequency "noise", such as that caused by bearing failure, which frequently cannot be measured with a conventional displacement type vibrometer. Extremely reliable and maintenance-free—available in various models and housings.

Write for technical bulletin RF-586-D.

"Everything's under control"

AERONAUTICAL AND INSTRUMENT DIVISION
Robertshaw-Fulton CONTROLS COMPANY
SANTA ANA FREEWAY AT EUCLID AVENUE • ANAHEIM, CALIFORNIA

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HI-EFFICIENCY

1.7 3.0 microns

THERM-X-RED†

IMMERSION HEATERS

Featuring

VAPO-VENT†

VAPOR and LIQUID TIGHT VENTING ASSEMBLY ON ALL QUARTZ HEATERS

and

NEO-TITE†

VAPOR and LIQUID TIGHT ASSEMBLY ON ALL METAL HEATERS

Presenting The NEW REPLACEABLE HEATING ELEMENT

THERM-X-RED, a superior line of immersion heaters, presented by **N.J. THERMEX**, introduces a new innovation of vapor venting to eliminate internal explosion in Quartz heaters. The **VAPO-VENT** assembly provides a venting system for expanding gases, a completely liquid sealed head assembly and an extremely versatile unit which permits field repair with standard replacement. These exclusive **THERM-X-RED** features are further aided by the **NEO-TITE** vapor and liquid tight assembly which protects the heating elements in both Quartz and Steel units. Here at last, is a thoroughly versatile unit permitting even accidental total immersion in highly corrosive chemicals with no harm to the equipment.

These and many more features are fully detailed in our latest catalog available on request. Models in standard, thermostatic and remote control thermostatic units are available in Steel, Stainless Steel and Quartz construction.

† Trade Mark

*ON QUARTZ HEATERS

N. J. THERMEX COMPANY, INC.
535 - 533
BERGEN ST., HARRISON, N. J.

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TRUCO DOES IT AGAIN!

SLASHES COST IN CUTTING THROUGH HARD 12" CYCLOTRON WALL AT WASHINGTON UNIVERSITY

JOB: Cut four 14" openings through cyclotron wall to admit 12" pipes for storage of radioactive materials.

TOOLS: Truco Model C Portable Drilling Machine with 350 rpm motor and 6" Truco Diamond Drill Bits. Because of restricted space, machine was removed from its base and jacked between walls, providing rigidity and leverage for drilling. To shield workers from radioactivity, walls are a special pour which includes Meramec River gravel, making cutting tough. Using a 6" bit (instead of 14" O.D.) and drilling overlapping holes cut diamond bit cost in half. Total drilling time was only three days. Technical help was provided by Ray Martin Co. of Kirkwood, Mo., St. Louis area distributor for Truco products.

Truco unit is portable by one man; designed for high speed drilling in practically any location. Wired for 110V, 60 cycles or less. Air motors for explosive conditions. Send for new catalog and name of nearest distributor.

Top: Cyclotron wall is in a hallway, space is very restricted. Note cores in foreground. *Bottom:* Making big hole by over-lapping small holes cut diamond bit cost 50%.

TRUCO MASONRY DRILLING DIV.
WHEEL TRUEING TOOL CO.
44-3200 W. Davison Ave. • Detroit 38, Michigan

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FULL CONE—HOLLOW CONE—FLAT SPRAY

Spraco has the most complete line of nozzles available anywhere — **IN STOCK.** Capacities range from ⅛ pint/min. to 4000 gal./min. Bronze, cast iron, and stainless steel. Write for our nozzle catalog.

SPRAY ENGINEERING CO., *106 Cambridge St., Burlington, Mass.*

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Without Obligation: Send us a sample of your material. We will shred it and return it to you . . . without obligation.

Quickly shreds newspapers, magazines, waste paper, cellophane, tissue, corrugated cartons, wax paper, etc. into uniform resilient 1/8" to 3/8" strands, ideal for packaging purposes. Especially adapted to shredding confidential records, blue prints or any classified material. Send for descriptive bulletin S1255. Names of users near you available on request.

FREE TRIAL! Operate a SHRED ALL for 30 days — if not satisfied — return — owe nothing.

UNIVERSAL SHREDDER CO.

2934 Bay Road — Saginaw, Michigan

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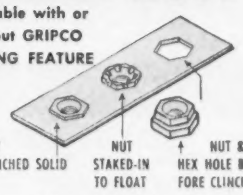
For "fixed" fastenings or "hard-to-reach" assemblies

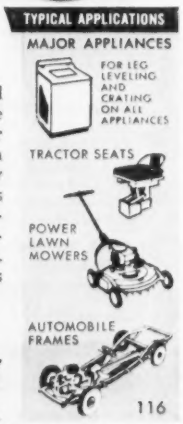
USE GRIPCO CLINCH NUTS

Available with or without GRIPCO LOCKING FEATURE



For positive attaching of a threaded medium to thin metals. They are clinched solid for a rigid application, or staked in with a six point staking punch for a floating effect. Can be automatically fed and clinched. Gripco Clinch Nuts can be clinched or staked with hydraulic or air equipment. Large inventories carried for immediate shipment. Full details available—write for samples and NEW CATALOG today.

TYPICAL APPLICATIONS



GRIP NUT COMPANY
106 Maple Ave.
South Whitley, Ind.

116

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MAGNIFYING COMPARATORS offered with variety of reticles

Radii, angles, chamfers, threads, small holes, odd shapes, and lineal, radial, and tangent dimensions of parts can be compared with a transparent, dimensional-scale pattern of Finescale magnifying comparators. Accurate plus or minus measurements are instantly and easily made. The instruments can be used in the inspection of gages, templates, layouts, forms and sizes of punches and dies, and cutting edges of tools. Desk and pocket models are offered with one and four pairs of reticles, respectively, for $15.50 and $18.50. Reticles are offered in pairs, one with black lines and one with white lines, to insure contrast with work. Variety of reticles is available at $1 per pair for measuring holes, thread pitches, radii, widths, etc. Made by **Finescale Co.,** 218 S. Western Ave., Los Angeles 4, Calif.

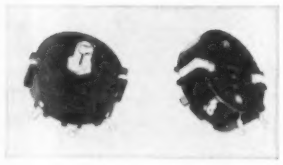
▲ For more details circle **NED-499 M8** on enclosed inquiry slip ▲

BALL BEARING LUBRICATOR renews grease in sealed types

Sealed ball bearings which have exhausted or worn-out grease supply can be restored to service with this wRIGHT Lubricator. Bearing to be greased is placed over device's hollow shaft, and is held in position with a hand nut. Manual or power lubricating gun forces grease into bearing and forces the worn-out dirty grease out. Two models are available for bearings with inside diameters of 0.375 to 1.0625 in. Distributed by **P-G Corp.,** 7723 Rocton Ave., Chevy Chase 15, Md.

▲ For more details circle **NED-500 M8** on enclosed inquiry slip ▲

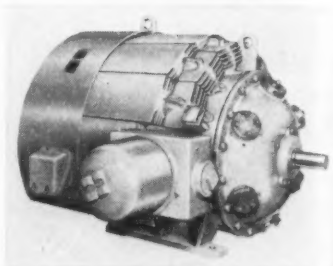
HIGH VOLTAGE CONTROL requires minimum depth behind panel



Designed for use in circuits in the kilovolt range, this high voltage control combines high power and voltage ratings with close resistance tolerances. It requires minimum depth behind panel. Applications include color television, radar, computers, telemetering, infrared detection, ion accelerators, and nuclear research. Made by **International Resistance Co.,** 401 N. Broad St., Philadelphia 8, Pa.

▲ For more details circle **NED-501 M8** on enclosed inquiry slip ▲

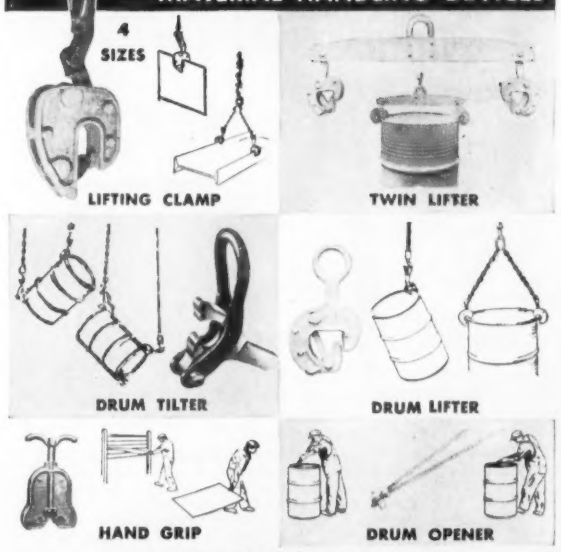
HEAT EXCHANGER MOTOR ratings from 25 to 300 hp



Wide adjustable speed range is provided by this direct-current heat exchanger-equipped motor, offered with an explosionproof enclosure (Class I, Group D Underwriters' label) for hazardous installations. Also intended for constant speed applications, it can be obtained with standard enclosed construction for protection against airborne abrasive particles, dirt, coolants, moisture, oil vapors, and severe atmospheric conditions. Range of adjustable speed extends from 5 per cent of base motor speed by armature control (constant torque) to 400 per cent by field control (constant horsepower). An integrally mounted alternating current fan motor supplies a constant flow of cooling air. Heat exchanger tubes of heavy section aluminum are distributed around the field ring periphery for air-to-air heat removal. Motor can be mounted horizontally on wall, ceiling, or floor, or vertically with shaft up or down. Made by **Louis Allis Co.,** Dept. P, 427 E. Stewart St., Milwaukee 1, Wis.

▲ For more details circle **NED-502 M8** on enclosed inquiry slip ▲

YOUR BEST MOVE IS TO MOVE WITH MERRILL MATERIAL HANDLING DEVICES



For Interesting Information write

MERRILL BROTHERS

56-13 Arnold Ave., Maspeth, N. Y.

3-R-5

▲ For more details circle **NED-503 M8** on enclosed inquiry slip ▲

New **Johnson** *Continucast** **105 Inch Bronze Bars**

ECONOMICAL • CONVENIENT • HIGH QUALITY

Now famous Johnson quality solid and tubular bronze bars are being produced by a continuous casting method to give you the economy and convenience of 105" lengths.

Continucast bars are economical because your distributor can cut this long bar in multiples of a variety of lengths to suit your requirements. You buy and handle less metal—pay for only the metal you use.

The continuous casting method improves the physical qualities of the Johnson alloy 72 (SAE 660) because the distribution of lead and other elements is more uniform. This improves machinability, gives you greater tensile, yield, impact and fatigue properties.

Johnson **Continucast** 105" Bronze Bars are available in 21 sizes of solid bars from ½" to 3" diameter and in 118 sizes of tubular bars which range from ½" to 2½" ID and from 1" to 3" OD.

For full information ask your distributor or write for folder JBL-14.

*Trademark

JOHNSON Bearings

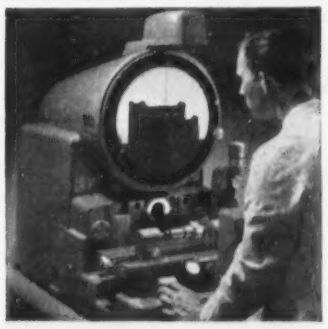
Johnson Bronze

580 South Mill Street • New Castle, Pa.

Subsidiary: Apex Bronze Co., Oakland, Cal.

▲ For more details circle **NED-504 M8** on enclosed inquiry slip ▲

Angles, radii, holes, surfaces . . . inspect them *all* with one instrument



Optical gaging with a Kodak Contour Projector lets you inspect critical dimensions on a wide variety of components to close tolerances quickly and economically.

Quickly because you can inspect *at a glance.* It's simply a matter of comparing the magnified projected image of the component with a chart gage on the projector screen.

Economically because you eliminate the need for buying a multitude of gages. With a Kodak Contour Projector, you see at a glance what it takes many gages and gaging operations to tell you.

A Kodak Contour Projector can solve your inspection problems in toolroom . . . receiving . . . production . . . final inspection. To find out more about optical gaging, send for the booklet "Kodak Contour Projectors." Write to:

Apparatus and Optical Division
EASTMAN KODAK COMPANY, Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

Kodak TRADEMARK

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over bending problems? Your solution may be "multiple bending" of pipe, tube or structural metal parts on PEDRICK PRODUCTION BENDERS. Let us show you. Write PEDRICK TOOL AND MACHINE CO., 3640 N. Lawrence St., Philadelphia 40, Pa. Dept. 6.

PEDRICK PRODUCTION BENDERS

Free "Pedrick Line" Bulletin. Write today.

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new fact-filled folders on PRESSURE SENSITIVE SILICONE TAPES

Dow Corning Silicone Adhesives make tapes that stick to wet or dry surfaces from −110 to 550° F, and possess many other advantages as well. Pressure sensitive silicone tapes form good bonds, stick to almost anything, have high dielectric strength, repel moisture and are not affected by corrosive chemicals. This new folder from Dow Corning explains the properties of tapes made with silicone adhesives, lists the different backing materials available, what each will do. Get your copy now, from

Dept. 5412

first in silicones

Dow Corning CORPORATION MIDLAND, MICHIGAN

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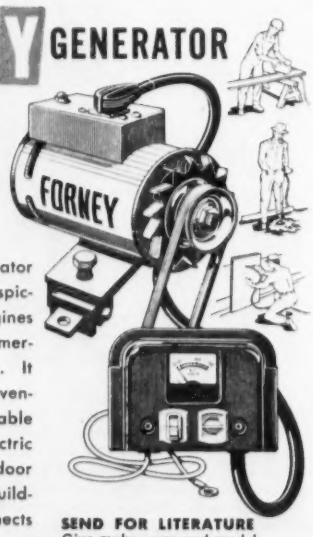
FORNEY GENERATOR

...GIVES A.C. MOBILITY TO POWER TOOLS



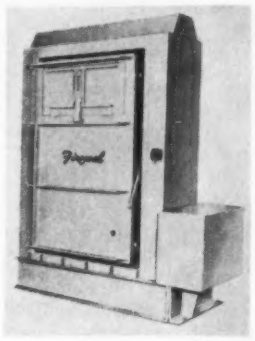
This 2,000 watt A.C. generator attaches quickly and inconspicuously to battery-start engines such as cars, tractors, commercial and industrial trucks. It frees workmen from conventional power lines, is capable of running four ½-inch electric drills at once. Useful to outdoor sign painters, repairmen, builders and many more. Disconnects from engine when not in use. Price, complete with mounting kit, control panel and service outlet **$137.00**

SEND FOR LITERATURE
Give make, year and model of vehicle when making inquiry or ordering. A nearby Forney distributor can give you a quick demonstration in most areas.

Forney INDUSTRIES
1816 LaPorte Avenue • Fort Collins, Colorado

▲ For more details circle NED-508 M8 on enclosed inquiry slip ▲

PAPER BALER
powered unit makes 175-250-lb bale



Noiseless in operation by virtue of its motor-speed reducer, this powered waste paper, corrugated, and fabric baler can be plugged into a 110 or 220-v wall socket. It is of welded steel construction, finished in baked green enamel, and requires a floor space of 21 x 54 in. Over-all height is 68 in. and shipping weight is 750 lb. Press produces a bale measuring 28 x 17 x 34 in. which weighs from 175 to 250 lb, depending upon the material baled. Made by **Firewel Co.**, Dept. B, 3685 Broadway, Buffalo 25, N. Y.

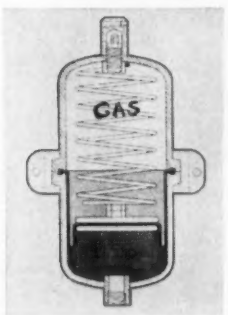
▲ For more details circle NED-509 M8 on enclosed inquiry slip ▲

DRILL SHARPENER
has 3/32 to ½-in. capacity

Heavy duty No. 21 Drill Pointer uses a technique which permits grinding an intensive clearance angle on the point as the drill web is approached. Basically the same as the standard No. 21 machine, this model uses ball bearings in conjunction with a cam-operated stud to control horizontal motion as the drill moves across the grinding wheel face. Capacity of both machines is 3/32 to ½ in. Standard equipment included is ¼-hp motor, grinding wheel, diamond dresser, jaw assemblies, and setting gage. Made by **Oliver Instrument Co.**, 1442 E. Maumee St., Adrian, Mich.

▲ For more details circle NED-510 M8 on enclosed inquiry slip ▲

HYDRAULIC ACCUMULATOR
offered in 13 sizes up to 2000 psi



SpeeCo accumulator absorbs line shock, minimizes pressure peaks, and smooths out pump pulsations, as well as acting as an effective booster in storing hydraulic energy. Its hat-shaped barrier seals the oil from the gas chamber, rolling inside-out without friction or wear when charging or releasing. Unit is easily installed, with female threads provided to specifications. Only maintenance is occasional replacement of the rubber barrier. Accumulator is available in 13 sizes from 15 to 7500 cu in. for units up to 2000 psi. Materials other than standard (steel), higher pressures, and larger sizes can be ordered. Made by **Special Products Co.**, 15000 W. 44th Ave., Golden, Colo.

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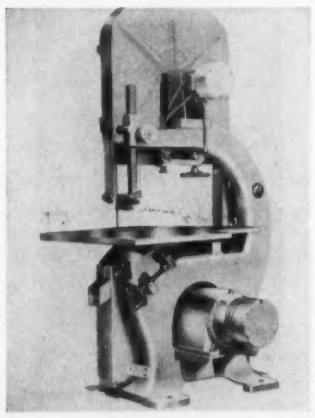
HEAVY-DUTY BANDSAW
has tension indicator, blade guide



Improved 36-in. heavy duty bandsaw features a stronger frame, a tension indicator, and a blade tracking guide. Bandsaws are available with direct motor drives of from 3 to 7½ hp and with belt drives. Latter drives are adaptable to cutting metals, plastics, fabrics, woods, and other materials. Speeds can easily be varied by changing drives, or by the use of a variable speed unit. Saws with greater capacities under guide, as well as units for left-hand operation are also available. Standard lower wheel foot brake, two-wheel foot brake, or a two-wheel automatic braking system can be chosen. Made by **Northfield Foundry & Machine Co.**, Northfield, Minn.

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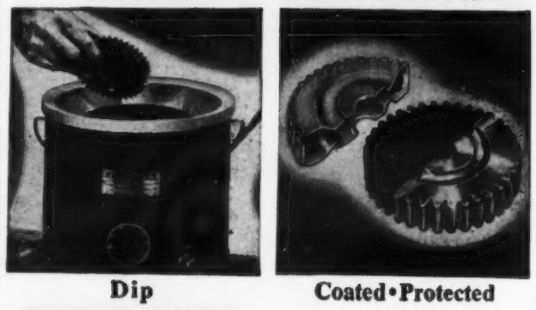
HOT MELT PLASTIC COATINGS for GEARS • TOOLS • PRECISION PARTS

BEFORE SECONDS AFTER



Dip Coated • Protected

DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
479 Frelinghuysen Avenue, Newark 5, N. J.

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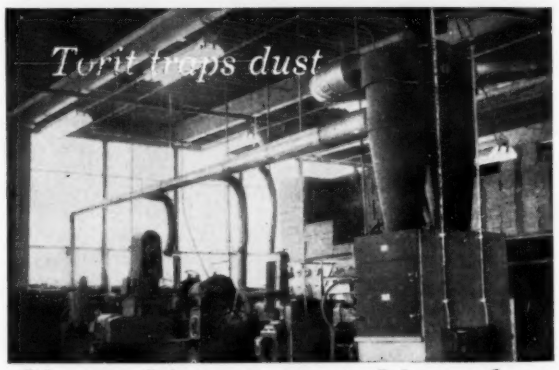

Six machines protected from dust by Torit for **$666.15**

This Torit Dust Collector, Model 219FM, complete with accessories, was installed by the Mohr Lino Saw Co., Skokie, Ill., to protect 3 belt sanders and 3 other grinders (2 grinders hidden from view) from destructive dust—at a total cost of just $666.15!

After one year's operation, Mohr Lino Saw says this about their *low-cost* Torit installation: "The Torit installation has kept our shop *cleaner*, our operators *happy*, and *protected vital* machinery."

You too can achieve greater machine protection and cleaner working conditions by trapping dangerous or valuable dust *at its source* with a completely *self contained* and *portable* Torit Dust Collector. For full details write to:

TORIT MANUFACTURING CO.
Dept. 203; Walnut and Exchange Sts., St. Paul 2, Minnesota

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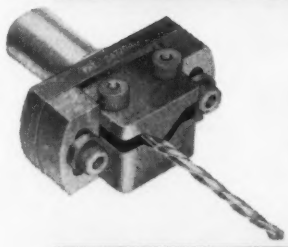
ACCURATE SET-UPS FAST!



Accurate, rapid set-ups the first time, every time . . . is the reason Brookfield Tool Holders are now widely used in practically every metalworking plant in the country. With one Brookfield Tool Holder, you can cut your stock of bushings by at least 100. Here's why:

BROOKFIELD TOOL HOLDERS

ADJUSTABLE V JAW holds wide range of tool diameters without bushings or accessories.

AXIALLY TRUE DESIGN makes perfect tool alignment almost automatic.

BALANCED-PRESSURE LOCKING ASSEMBLY maintains uniform seating, eliminates creep or shift.

EASY TO USE — just slip tool in the jaw, tighten, then float tool into dead center and lock.

AVAILABLE IN A WIDE RANGE OF SIZES

MODEL NO.	HOLDING RANGE	SHANK DIA.
BA-10	1/64"–3/16"	3/8"
DA-10	1/64"–1/2"	5/8"
DA-12	1/64"–1/2"	3/4"
GA-12	1/16"–3/4"	3/4"
GA-16	1/16"–3/4"	1"
KA-16	1/8"–1"	1"
KA-24	1/8"–1"	1 1/2"
PA-24	1/4"–1 1/2"	1 1/2"
PA-28	1/4"–1 1/2"	1 3/4"

WRITE FOR ILLUSTRATED CATALOG AND PRICES!

BROOKFIELD, INCORPORATED
STOUGHTON 114, MASSACHUSETTS

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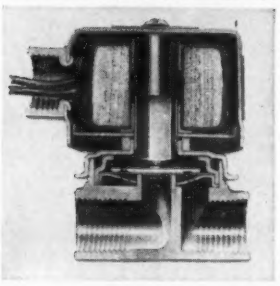
HUNDREDS OF USES!



JE

INDUSTRIAL SOLENOID VALVES

Uniquely suitable for industrial flow control of water, air, low pressure steam, light oils, brines, industrial and L.P. gases, etc.

These remarkable new valves have been successfully used to control air and fluid flow in connection with such varied products as

COMMERCIAL GARBAGE DISPOSALS, DISHWASHERS, AUTOMATIC LAWN SPRINKLERS, SPRAY PONDS, WATER SOFTENERS, AIR COMPRESSORS, HOT WATER HEATING SYSTEMS, SPRAY LUBRICATION SYSTEMS, PNEUMATIC TOOLS, etc.

5/16" to 1½" Port Sizes ¼" to 1½" N.P.T. Connections.

To see how "J-E" industrial solenoid valves can solve your flow problems—write for bulletin J-57.

JACKES-EVANS MANUFACTURING CO.
4427 Geraldine Ave., St. Louis 15, Mo.

For more details circle **NED-516 M8** on enclosed inquiry slip

SUTORBILT IS WELL BUILT

SUTORBILT
BLOWERS for air

- **Rotary positive displacement**
- **No internal lubricant**
- **Delivers clean, dry air**
- **Heavy duty anti-friction roller bearings**
- **Wide-face herringbone gears**
- **Exclusive Sutorbilt Timing Hub**
- **Capacities up to 20,000 cfm . . . to 10 psig**
- **Write for bulletin on blowers and gas pumps**

Representatives located in principal cities. Consult your classified telephone directory.

1166 S-13

SUTORBILT CORPORATION, 2966 EAST VICTORIA ST., COMPTON, CALIF. SUBSIDIARY OF FULLER COMPANY

FULLER COMPANY CATALEN

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IT'S HOT!

New brochure tells you all about North PVC Industrial Gloves, latest advance in the field. Outlast others two to five times, comfortable, chemical resistant. Write for your copy today.

JOMAC *Inc.*

Dept. G, Philadelphia 38, Pa.

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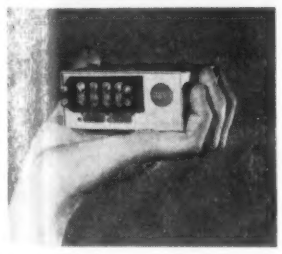
DC VOLTAGE SUPPLY
replaces cells and batteries

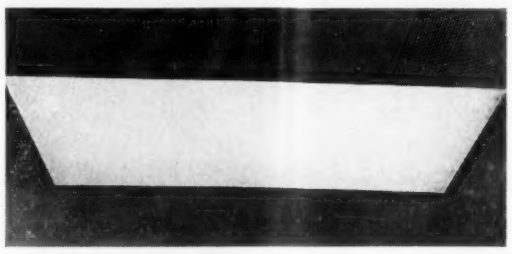


Small enough to be held in one hand, this stable, direct current, voltage supply can be used to power potentiometer type recorders, bridge circuits, and industrial measuring potentiometers. It operates from any standard 115-v ac power source. Delivered voltage is essentially constant in spite of supply or temperature changes. This two-stage voltage stabilizer and rectifier unit has standard output of 1 v dc at 2 ma into a 500-ohm load. Other outputs are available. Made by Hays Corp., 980 Eighth Ave., Michigan City, Ind.

For more details circle **NED-519 M8** on enclosed inquiry slip

POLARIZING LIGHT PANEL
produces glare-free illumination

High level of illumination with controlled reflected glare is possible with a single Fiberglas polarizing light panel. It employs reflected and refracted polar-



ization to achieve brightness control and uniform light distribution. Polarization of light eliminates many of the beams emitted from their source at undesirable angles, thus making possible maximum use of available light. The textured appearance of the panel blends with acoustical ceiling tile to create patternless ceiling areas. Surface of the panel is smooth and easily cleaned. Polarizing material is produced in flat sheets consisting of color-stable resin, reinforced with Fiberglas flake. Available sizes are up to 24 x 48 in. Made by **Owens-Corning Fiberglas Corp.**, 16 E. 56th St., New York 22, N. Y.

For more details circle **NED-520 M8** on enclosed inquiry slip

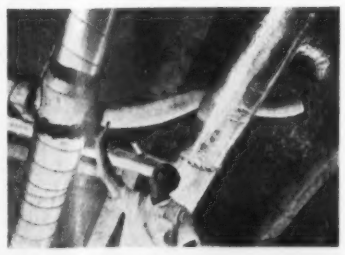
WIRE TIES
for bundling and grouping wires

Holding with a good grip, but quickly removed for adding new wires or for repair, E-Z polyethylene wire ties have high strength and good dielectric properties.

Suited for bundling and grouping wires, they can be reused. Plastic bead-chain type units self-adjust to size of bundle. The chemically inert, heat resistant ties have a 45-lb breaking point. Made by **Richco Plastic Co.**, 4445 W. Fullerton Ave., Chicago 39, Ill.

For more details circle **NED-521 M8** on enclosed inquiry slip

FLEXIBLE AIR DUCT
fabric-metal type for permanent use is flame resistant and vaporproof



Crush and puncture resistant flexible air duct can be restored to its original shape, even after a deforming blow. Made of United States Rubber Co.'s Asbeston aluminized asbestos cloth and steel spirals, the duct can be permanently installed in new and existing structures in high and low velocity air conditioning systems. It bends without kinking around structural members and in cramped quarters with little or no cutting of floors and walls. Fabrics used in its construction is flame resistant, Underwriters' grade asbestos cloth, protected by a laminated, polyester-reinforced aluminum foil that serves as a moisture and vapor barrier. Metal is an electrogalvanized steel spiral. Duct also features low friction loss, absence of odor under operating temperatures, and acid and oil resistance. Lengths up to 20 ft are offered in 3 to 12-in. OD. Made by **Wiremold Co.**, Hartford 10, Conn.

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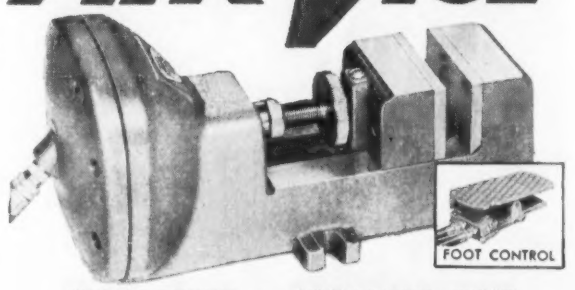
Speedy AIR VISE



HIGH SPEED • POWERFUL GRIP

New, improved model speeds up all repeat operations—*milling, drilling, tapping, punching, bending, riveting.* Both hands left free to produce more! Light squeeze to 2250 pounds pressure! Extra thick jaws for attaching jigs. Jaws open to 3-inches; 1/16" to 5/8" maximum travel. Complete with foot control, air hose and fittings..... **$44.00**

SPEEDY 1-TON AIR PRESS
Does the work of expensive presses! Power factor 15 times air line pressure. 5-inch throat; Ram 0 to 5"; stroke ⅝"; table 5" x 5". Operated by foot or fingertip controls. **$85.00**

Order from Your Supplier or Write for Air Tool Catalog

W. R. BROWN CORP., 2647 N. Normandy Ave., Chicago 35

AIR TOOLS • AIR VISES • AIR REGULATORS • FILTERS • COMPRESSORS

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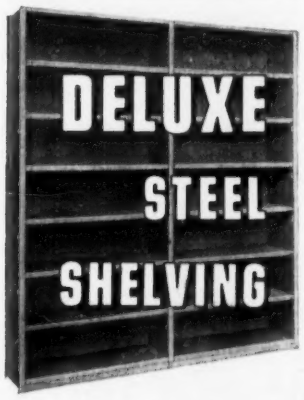
fastest TO ERECT

fastest TO RE-ARRANGE

fastest TO PAY FOR ITSELF



fastest because . . . the exclusive Deluxe boltless shelf bracket replaces 90% of time-consuming nuts and bolts, providing quick installation and quick, easy shelf adjustment.

Proof of this was demonstrated at 1958 trade shows where two girls erected a complete section of Deluxe Shelving in less than 5 minutes.

Call your local Deluxe dealer for quick, efficient shelving layout service. Or write for the new Deluxe Shelving Catalog #30.

DELUXE METAL FURNITURE CO. • WARREN 2, PA.
A Division of the Royal Metal Mfg. Co.

DELUXE

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"APCOTITE"®
Rubber-To-Metal Bonding

"APCOTITE" is exclusive with Acushnet Process Company — quality bonding of Silicone and all types of rubber polymers to all metals for the lifetime of the part.

To obtain maximum strength, toughness and resiliency, shock and vibration absorption, sound abatement, electrical insulation, resistance to corrosion and abrasion, specify "APCOTITE".

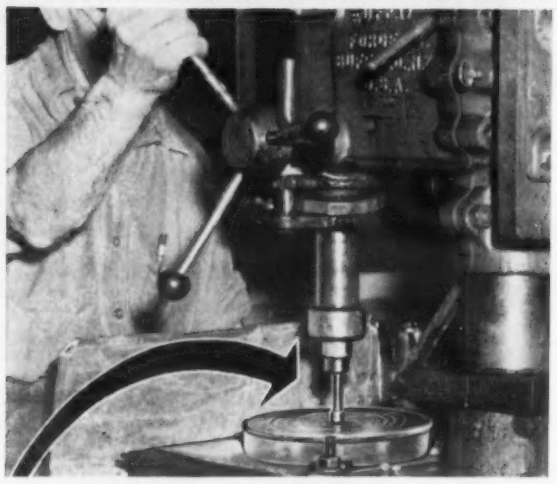
Acushnet PROCESS CO.

Send for Acushnet brochure "Rubber-To-Metal Bonded Parts", a helpful guide giving detailed information about this modern adhesion process.

Address correspondence to 782 Belleville Avenue, New Bedford, Mass.

For more details circle **NED-525 M8** on enclosed inquiry slip

One Hoffman Bit Drills Up to 15,000 Godet Wheels With No Downtime



Up to 15,000 Godet Wheels drilled with center hole tolerance 1.5 min. to 1.53 max.—with one Hoffman Laboratory Bit. Actual production figures that are being duplicated by many Hoffman Bit users for precision drilling of glass, ceramics, quartz, etc. Diamond impregnated or oriented surface set.

Write for Illustrated Literature and Prices—FREE

HOFFMAN BROS. DRILLING CO.
SINCE 1902
106 Cedar Street PUNXSUTAWNEY, PENNA.

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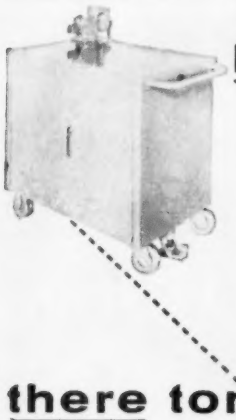

here today...

Portable workbench can be rolled to work location by one man. Doors can be locked to fully protect all contents. Unit is all-welded 1/8-inch and 3/16-inch steel plate construction . . . and can support up to 2000-pounds safely. Heavy-duty roller bearing wheels (hard rubber or phenolic resin) are furnished. Foot-operated locking mechanism securely positions workbench.

Standard "Roll-A-Bench" weighs 325-pounds and is 34-inches high, 41-inches long and 26-inches wide. Other sizes are available to meet individual requirements. *Write* today for literature.

there tomorrow!

Overbeke-Kain

MOBILE WORKBENCH

Several territories available for qualified manufacturer's representatives or distributors. Write today for information.

6755-OK

THE OVERBEKE-KAIN COMPANY
20979 Aurora Road • Bedford, Ohio

Overbeke-Kain

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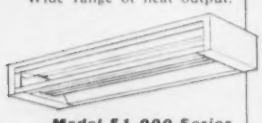
Assemble these **FOSTORIA**

INFRA-RED SECTIONS

easily and at low cost for many heating jobs

Model 48-000 Series sections use G-30 lamps in 125, 250, 375 and 500 watt sizes. Low first cost. Efficient, economical operation. Wide range of heat output.



Model 51-000 Series sections use quartz lamps, quartz tubes, or metal rods. Ideally suited for a wide range of heating jobs. Choice of aluminized or gold reflectors.

Complete set of parts available . . . full instructions provided

Many uses include spot heating jobs, laboratory applications, production heating, baking, drying, degreasing, curing, etc. Save time and cut processing costs.

Features. Precision built sections. Top quality materials. Exceptionally high efficiency rating. Sections available in various lengths and widths.

Easy assembly. Any maintenance or electrical worker can assemble with instructions provided. Portable or permanent type ovens can be assembled from Fostoria parts.

Available through electrical wholesalers everywhere. Ask for free literature and specifications. Or write direct to factory: Dept. N-1258.

THE **fostoria** PRESSED STEEL CORPORATION
Fostoria, Ohio 5801

LARGEST MANUFACTURER OF COMPLETELY ENGINEERED INFRA-RED OVENS AND COMPONENTS IN U.S.A.

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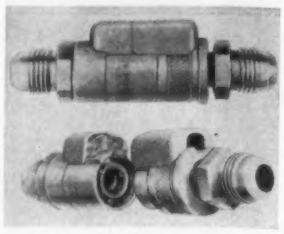
QUICK COUPLING
makes electric and oxygen connection



Necessary oxygen, electrical heating, and communication connections are made through this single 1½-oz combination quick coupling developed for the aircraft and missile industries. Used for pilot breathing apparatus and survival kits, it is also adaptable for ground handling and test equipment. Upon connection, seal engages before electrical contacts are made, and conversely when disconnected. Thus, coupling is applicable for use with inert gases, inflammable gases, and all types of oxygen service. Unit is rated 27 cfm flow at 90 psi and has operating pressure up to 250 psi. Temperature range is −85 to 300° F. It delivers 150 liters of oxygen at 90 psi with less than 1 psi pressure drop. Made by **Perfecting Service Co.**, 332 Atando Ave., Charlotte 6, N. C.

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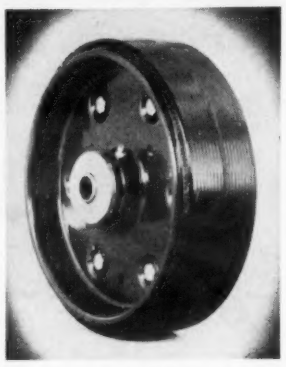
RUBBER-TIRED WHEEL
demountable, 1000-lb capacity type



Wide-based rubber tire of the heavy duty MB 10 x 3-in. demountable wheel is molded to a steel V-back rim. This back design keeps the rubber firm and dense under compression for easy rolling under heavy loads. Capacity is 1000 lb. Wheel also has formed steel discs, one-piece hub assembly, sealed bearings, and a lubrication fitting. Made by **Rapids-Standard Co.**, 342 Rapistan Bldg., Grand Rapids 2, Mich.

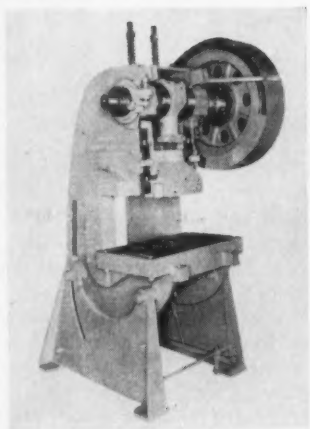
▲ For more details circle **NED-530 M8** on enclosed inquiry slip ▲

FOUR-WHEEL TROLLEY
moves up to 500-lb material loads

Applicable where movement over relatively short distances is required for loads up to 500 lb, this four-wheel trolley can be manually operated on straight track or horizontal bends of 12, 18, 30, 36, and 48-in. radii. It has track hanger clamps, cast side plates, hardened side bearings, and Zerk fitting for lubrication. Uses include storage of parts in manufacturing, tool and die shop transfer, prefabrication manufacturing, order picking, and movement between washers and dryers. Made by **Rapistan-Keystone, Inc.**, 21751 W. Eight Mile Rd., Detroit 41, Mich.

▲ For more details circle **NED-531 M8** on enclosed inquiry slip ▲

40-TON OBI PRESS
has large ram and bed areas



Generous ram area, large bed area, and extra throat depth of this 40-ton Press-Rite open back inclinable press allows it to accommodate large or bulky die sets for die cast trimming or electronic work. Fabricated steel frame is heavily reinforced at all vital points. Press will handle work normally placed on higher tonnage machines. It is available in flywheel or back-geared types with either Press-Rite mechanical or Airflex air friction clutch, with greater than standard shut height, and with longer or shorter than standard 3-in. stroke. Made by **Sales Service Mfg. Co.**, 2363 University Ave., St. Paul 14, Minn.

▲ For more details circle **NED-532 M8** on enclosed inquiry slip ▲

SENT FREE!

KNOW YOUR PAINTING COSTS - PERFORMANCE
You Can SAVE on Maintenance!

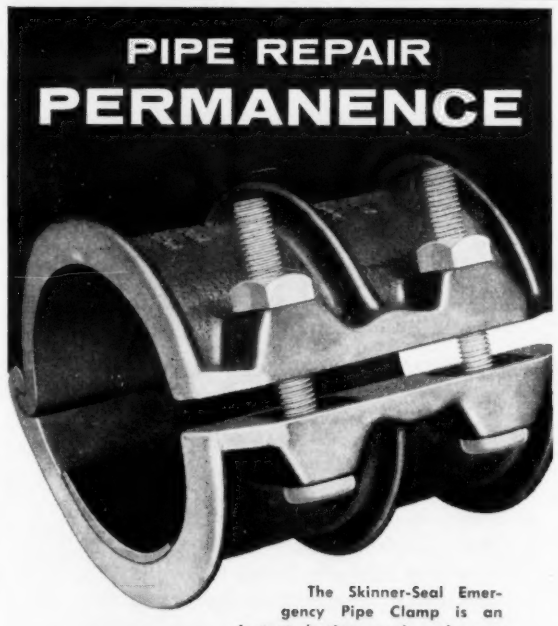
Get substantial savings in maintenance painting with this record book. It takes the guesswork out of paint selection and application. Provides complete records of areas painted, dates, brands and quantities used, costs and durability. All buildings, rooms and equipment can be included—and it becomes your assurance of better, money-saving painting for years to come. FREE! Your letterhead request brings a free copy of this file-size, 24-page book. Write today!

SEE US AT NATIONAL MAINTENANCE SHOW CLEVELAND JAN. 26-29

TROPICAL PAINT COMPANY
1124-1224 W. 70th, Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883 • SUBSIDIARY OF PARKER RUST PROOF COMPANY

▲ For more details circle **NED-533 M8** on enclosed inquiry slip ▲

PIPE REPAIR PERMANENCE



The Skinner-Seal Emergency Pipe Clamp is an instant, lasting repair under any operating condition. Rugged malleable iron. Anyone can apply in a few moments. Made in all sizes, ½" to 12", for steel and C. I. pipe. Stocked by practically all supply stores.

M. B. SKINNER CO., South Bend 21, Ind. — Established 1898

▲ For more details circle **NED-534 M8** on enclosed inquiry slip ▲

Easy to operate. Extremely durable. Simple to maintain.

For your files: Complete specifications and price list for all models. SEND INQUIRY CARD TODAY.

"CADILLAC" LOW-COST WINCH HOIST

Every Hoist PRE-TESTED for MAXIMUM PERFORMANCE MAXIMUM SAFETY

Check these features:

- Precision-built of certified materials.
- High-strength, corrosion-resistant TENZ-ALOY castings. Tensile strength 32,000.
- Light weight and compact.
- Stainless steel springs and shafts.
- Manganese bronze cam reduces pawl wear.
- "Safety-valve" handle breaks at severe overload.
- Drop-forged, heat-treated hooks. Safety hooks available.
- Equipped with galvanized, pre-formed aircraft wire rope.
- Tested to full 50% overload.
- Full year guarantee against defective workmanship and materials.

Model 202WX 1½-ton capacity equipped with 20' of 3/16" galvanized wire rope. Lifting ratio approx. 30 to 1. Weight 10 lbs. Min. distance between hooks 25". 20' single, 10' double line. Models from ½ to 2 tons cap. Prices: $29.50 and up.

ALUMINUM PRODUCTS, INC.
P.O. BOX 1462-N FORT LAUDERDALE, FLORIDA

▲ For more details circle **NED-535 M8** on enclosed inquiry slip ▲

SEE HOW YOU CAN SAVE

when you build railings with

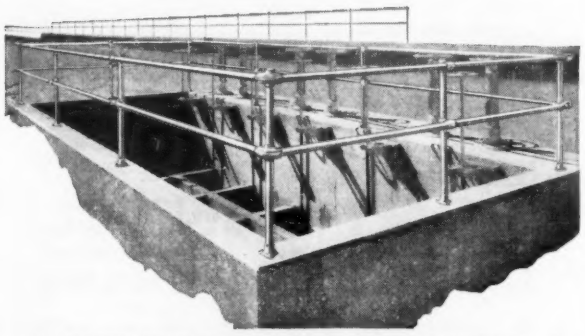
NU-RAIL® FITTINGS

Eliminate threading and welding when installing railings and you can save real dollars. You'll save those dollars when you use specially-designed NU-RAIL Slip-On Fittings—the quick, easy and economical method of pipe fitting. On long runs, mill lengths of pipe can be used without cutting.

On a mile of railing built at this Texas sewage treatment plant the unique offset and slip-on features of NU-RAIL Fittings resulted in significant savings—up to 80% of labor cost.

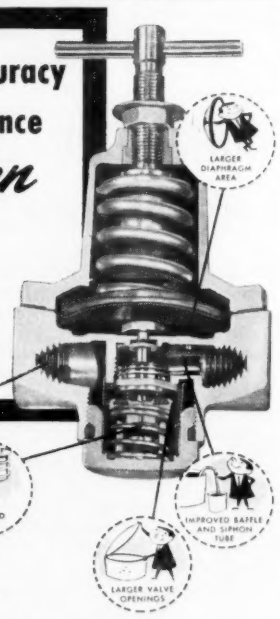
For more money-saving ideas in railing construction write for Bulletin 19-E.

THE HOLLAENDER MANUFACTURING CO., 3841 Spring Grove Ave., CINCINNATI 23, OHIO



▲ For more details circle NED-536 M8 on enclosed inquiry slip ▲

For Greater Accuracy Better Performance ...Norgren PRESSURE REGULATORS



FOR AIR, OIL, NON-CORROSIVE LIQUIDS AND GASES

If it's Norgren...It's Dependable.

C. A. NORGREN CO. WRITE FOR DESCRIPTIVE LITERATURE

3405 SO. ELATI STREET • ENGLEWOOD, COLORADO

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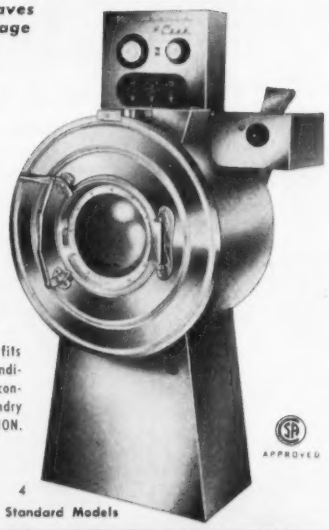
Washette by Cook

AMERICA'S LEADING OPEN-END WASHER

OPERATING COSTS GO DOWN!

On the job laundry saves time — increases useage efficiency.



Washette BY COOK *is ideal for ...*

- Factories
- Industrial Plants
- Offshore drilling rigs
- Construction Camps
- Tankers, Barges
- Field Camps
- Anywhere laundry must be done efficiently, economically.

Washette is completely flexible, fits varied and complex laundry conditions, easy to use, simplified controls. If you have a special laundry problem, write us—NO OBLIGATION.

AVAILABLE IN AC-DC

Write for FREE brochure

48-Hour Shipment on all Standard Models

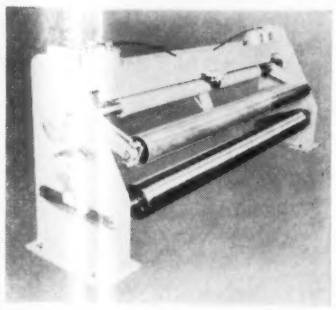
APPROVED

Cook Machinery Co., Inc.

4301-T S. Fitzhugh Ave. Dallas 10, Texas

▲ For more details circle NED-538 M8 on enclosed inquiry slip ▲

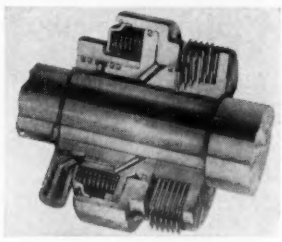
CONSTANT TENSION DEVICE used with printer slitter-rewinder



This pneumatic constant tension device is intended for use with printing presses, slitter-rewinders, and laminators. It will operate in conjunction with other air or electrically operated units for automatic tension control. The dancer roll will accommodate a wide range of tensions for various materials. It is air-loaded by remote control. Sensitivity of the unit is increased by the friction-free loading mechanism, making it applicable for handling lightweight material grades. Made by **Black-Clawson Co.**, Dilts Div., N. First Street, Fulton, N. Y.

▲ For more details circle NED-539 M8 on enclosed inquiry slip ▲

MULTIPLE PLATE CLUTCHES transmit up to 690 lb-ft of torque



Built to run in oil and actuated by 100 to 300-psi oil pressure, Models DO and DOC wet-type multiple - plate clutches are designed for machine tools, transmissions, and similar uses. They never require adjustment for wear and are available in 3 to 7-in. diameter sizes. They can transmit up to 137 hp and up to 690 lb-ft of torque. Model DOC has an integral oil collector. Only connection needed is a 1/4-in. NPTF line to the stationary collector. Model DO is identical except for omission of the around-the-shaft collector. Allowable speeds are up to 5000 rpm for the smallest sizes and up to 3250 rpm for the largest. Both types can employ operational forced cooling by pumping oil through the plate stack. Made by **Twin Disc Clutch Co.**, Racine, Wis.

▲ For more details circle NED-540 M8 on enclosed inquiry slip ▲

AUTOMATIC AIR BOOSTER furnished in varying ratios

Function of the Lynair automatic air booster is to boost air line pressure in surge tanks and die cushions and maintain constant air pressure on press clutches. Device is furnished completely valved and ready to operate after making only two connections. Pressure regulator, filter, and lubricator are furnished. Ratios from 1.5:1 to 6.25:1 are available in units with six types of mountings. Made by **Lynair Inc.**, Dept. A-B, 3100 E. Michigan Ave., Jackson, Mich.

▲ For more details circle NED-541 M8 on enclosed inquiry slip ▲

PRECISION DISC GRINDER finishes two parallel sides of part

Available with 36 or 42-in. diameter abrasive discs, and with a variety of work-carrying fixtures, Model 2H40L disc grinder will handle metallic or nonmetallic

workpieces ranging in diameter to 18 in. Illustrated machine is equipped with a rotary carrier fixture for grinding two parallel sides of valve plates simultaneously. A horizontal trough loader feeds parts into the carrier stations. Automatic face cut mechanism assures progressive stock removal. It also has an automatic diamond dresser, automatic size control, and integral wet grinding system. Made by **Gardner Machine Co.**, Dept. 31, Beloit, Wis.

▲ For more details circle NED-542 M8 on enclosed inquiry slip ▲

HARGRAVE Tested Tools THE CINCINNATI TOOL COMPANY

HARGRAVE

THE MOST COMPLETE LINE

Individually Power-Tested

WRITE FOR FREE CATALOG

Showing a Clamp for every purpose, openings from 3/4" to 12' and depth from 11/16" to 16", also Chisels, Punches, Masonry Drills, Gasket Cutters, Brace Wrenches, File Cleaners, etc.

There is an industrial Distributor Stock Near You

THE CINCINNATI TOOL COMPANY

1995 Waverly Ave., Cincinnati 12, Ohio

▲ For more details circle NED-543 M8 on enclosed inquiry slip ▲

FAST DELIVERY on NOPAK shelf-stock AIR CYLINDERS!

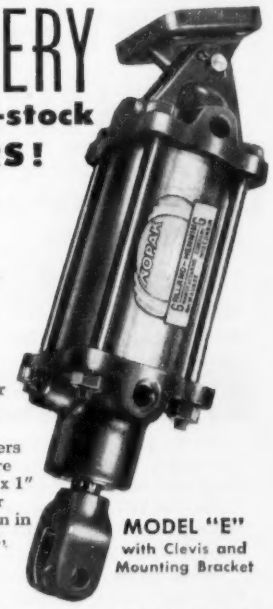
Your choice of —

- 6 Mounting Styles
- 8 Bore Sizes
- 9 Stroke Lengths

When you specify NOPAK "Shelf-Stock" Air Cylinders you save money 3 ways:

1. You eliminate waiting for "specials".
2. You reduce engineering costs.
3. You get top quality NOPAK Air Cylinders at the lowest possible prices.

NOPAK "Shelf-Stock" Air Cylinders are available in a wide range of bore sizes and stroke lengths from 1½" x 1" to 8" x 15". No other manufacturer offers such a wide range of selection in Brass Tubing, Precision Machined, Cushioned Air Cylinders at comparable prices.



MODEL "E" with Clevis and Mounting Bracket

NOW! 5" BORE replaces the 4½" bore in the NOPAK Shelf-Stock line, with no price change — extra cylinder power at no extra cost. Compare quality and prices, and you'll specify NOPAK. Write for Current Listings and Catalog 101.

GALLAND-HENNING NOPAK DIVISION • 2755 S. 31st St., Milwaukee 46, Wis.

NOPAK VALVES and CYLINDERS

▲ For more details circle NED-544 M8 on enclosed inquiry slip ▲

SUPER LOW-COST CUTTING

CUT PIPES AND TUBES

FAST

THE SUPER-SPEED ROTARY WAY

CONTINENTAL ROTARY CUT-OFF MACHINES

fast—cut lengths in just seconds

economical—up to 100,000 cuts per cut-off wheel

saving—no waste loss of your material

Air or manual, 3/8" to 12¾" O.D. Request catalog.

SINCE 1919

Continental machine co.

2345 W. NELSON ST. • CHICAGO 18, ILL.

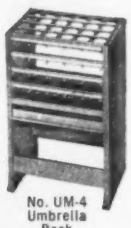
▲ For more details circle NED-545 M8 on enclosed inquiry slip ▲

The OFFICE VALET® Lockerette

Combines the best features of both lockers and coat racks.

Wraps are exposed to air and light. Employees do not face the weather in damp wraps that have been crumpled in dark lockers—do not eat soggy lunches, soaked by wet hats or gloves. Each person has his own spaced coat hanger, ventilated hat shelf and 12" x 12" x 15" deep lock box for lunches, tools and personal effects. Improves health and morale—lower absenteeism.

Lockerettes save space too . . . the No. 6-12 (2-column) accommodates 12 people in 6 feet; the No. 9-18 (illustrated) accommodates 18 in 9 feet.



No. UM-4 Umbrella Rack

WRITE FOR BULLETIN LO- 8

VOGEL-PETERSON CO. 1121 West 37th St. Chicago 9, Ill.

▲ For more details circle NED-546 M8 on enclosed inquiry slip ▲

PAINT STRIPPING CLINIC!

Send Us Your Tough Stripping Problems for Fast Action!

10 YEARS OF BECK PAINT STRIPPING CLINICAL SERVICE Saves Thousands of $$$ for Customers—Who Now Use World-Famous...

EPOXYSTRIP

Better find out for yourself . . . about Epoxystrip, Econostrip and other Beck Paint Remover lines and formulations. Use the BECK CLINIC SERVICE—send us several parts, sections, or test panels (properly tagged) of the work to be stripped.

Write or 'phone giving us essential information—your problem details, requirements, tanks available, hot or cold, etc. This service, and our prompt report, are free, with no obligation.

Beck Strippers outstrip all others — removing organic finishes, epoxies, etc., as easily as baked enamels, lacquers, etc. No stripping scum — clean rinsing!

SEND FOR FREE BROCHURE

BECK EQUIPMENT COMPANY
3350 WEST 137th STREET — CLEVELAND 11, OHIO

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KEEP MACHINES RUNNING
...reduce maintenance costs,

with DEUBLIN ROTATING UNIONS

¾" Size Union Illustrated

for water, steam and air service!

Here is a compact, efficient rotating union—

- ★ LEAKPROOF
- ★ CORROSION PROOF
- ★ EASY TO SERVICE
- ★ VIRTUALLY FRICTIONLESS
- ★ PRECISION BUILT FOR LONGER LIFE
- ★ INTERCHANGEABLE with any other rotating union
- ★ VERSATILE—For Monoflow or Duoflow operation, available in ½", ¾", 1", 1¼" and 1½" sizes
- ★ MINIMUM TORQUE makes it ideal for high speed applications

See how this dependable, new rotating joint can reduce inventory of replacement parts because of Deublin's standardization of sizes. Keep "shut downs" from wrecking your production schedules. Pays for itself many times over.

Write today for full details and prices.

DEUBLIN COMPANY
51 Waukegan Road
Glenview, Ill. (Chicago Suburb)

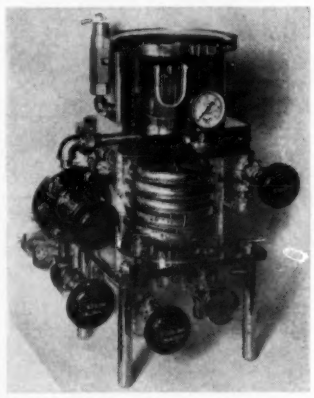
▲ For more details circle NED-548 M8 on enclosed inquiry slip ▲

NEON PILOT LIGHTS have high brightness, 5000-hr life

Over eight times the brightness of NE2 and NE51 pilot lights is given by Omni-Glow NE2H and NE51H neon pilot lights, yet they have a life in excess of 5000 hr. Lights are finished assemblies, ready for installation in a ½-in. hole with a slip-on Speed Nut. Units are offered in a variety of styles with a choice of lens shape and color, body lengths, terminal leads or lugs, and lens markings. They are UL and CSA approved. Made by **Industrial Devices, Inc.**, 982 River Rd., Edgewater, N. J.

▲ For more details circle NED-549 M8 on enclosed inquiry slip ▲

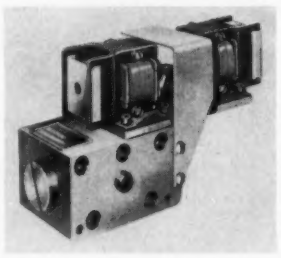
DISTILLATION UNIT makes sterile water from steam



Economical means of producing on-site, high purity, injectable water is provided by the Steril-Aqua distillation unit (see cut-away view). It produces sterile, pyrogen-free water from ordinary boiler steam. Water purposely contaminated to 6500 ppm can be purified to 0.5 ppm in a single pass. Operation is continuous and automatic, with no flushing or deconcentration required. Standard units are available in 5, 25, 50, 100, 250, and 500-gph capacities. Larger units can be custom-produced. All parts in contact with pure vapor or distillate are Type 316 stainless steel and gaskets are Teflon, while filter tank assembly and piping between steam separator and tank are Type 302 stainless steel. If water purity falls below a preselected standard, water is bypassed to waste automatically. Visible and audible signals indicate this condition. Made by **Wilmot Castle Co.**, 1927 E. Henrietta Rd., Rochester, N. Y.

▲ For more details circle NED-550 M8 on enclosed inquiry slip ▲

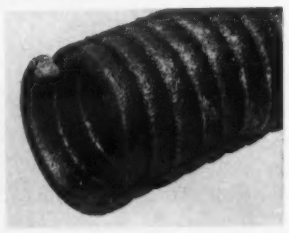
DIRECTIONAL CONTROL VALVE operated by dual solenoids



Direction of flow for hydraulic actuations can be remotely controlled by this ¼-in., four-way, two-position, directional control valve. Continuous duty dual solenoids provide quiet shifting. The 8⅛ x 2 3/16 x 4½-in. unit has a flow capacity of 3½ gpm and an operating pressure of 1000 psi. It can be mounted horizontally or vertically and is available in manifold or pipe tap types. A single solenoid type is also offered. Made by **John S. Barnes Corp.**, Dept. NED, 301 S. Water St., Rockford, Ill.

▲ For more details circle NED-551 M8 on enclosed inquiry slip ▲

COMPRESSION PACKINGS sheet and rod seal types



Natural rubber, several types of synthetic rubber, compressed rubber and asbestos, laminations, and vegetable fiber or "paper" forms are available in sheet type Val-Pac compression packings. Val-Pac rod seals are supplied in cotton, flax, jute, asbestos, and metal types. Constructions are twists, plaits, braids, wraps, laminations, and Lockbraid. Rod seals are supplied on spools, as cut rings, or as spirals and coils. Sheet packings are available on the roll or as precut gaskets. All Val-Pac rod seal packings are impregnated with lubricants compatible with end services. Teflon is also available as an impregnant for rod seal packings. Made by **E. F. Houghton & Co.**, Dept. NED, 303 W. Lehigh Ave., Philadelphia 33, Pa.

▲ For more details circle NED-552 M8 on enclosed inquiry slip ▲

HOLTITE Heat Sealed ENVELOPED SCREWS
for manufacturers who supply screws with the product

ENVELOPES available from stock are White Kraft—Brown Kraft and transparent Cellophane — or any combination. SPECIAL papers and colors, or plastic can be furnished quantity permitting.

ENVELOPE SIZES can be 2", 3" or 4" wide and any length from 2" to 5".

ANY NUMBER and variety of screws and/or nuts can be enveloped together, subject to capacity of envelope.

DESCRIPTION, instructions, name, trademark, etc. can be printed on envelopes at small extra cost.

ELIMINATE loose screw counting and wrapping. Save time, cost, complaints. No overage — no shortage. Screws heat-sealed in polyethylene coated paper or cellophane — protected from moisture. For details, write Dept. ND.

CONTINENTAL
SCREW COMPANY, NEW BEDFORD, MASS.
HOLTITE FASTENERS
HOLTITE PHILLIPS AND SLOTTED HEAD
WOOD • MACHINE • TAPPING • THREAD FORMING • SEMS • NYLOK

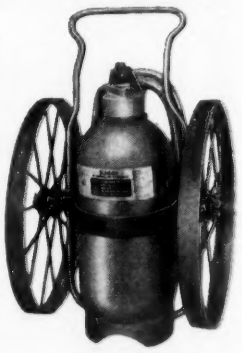
▲ For more details circle NED-553 M8 on enclosed inquiry slip ▲

NEW!

One-Man Dry Chemical Kills More Fire Faster!

Now—get more fire-smothering dry chemical on a blaze faster – with this new Kidde 200-pound mobile unit! Its universal nozzle discharges a dense 40-foot stream, gives more efficient extinguishing action, greater heat protection for the operator. And check these many Kidde features:

50 Extra Pounds of Dry Chemical • Low Total Weight • No Valves to Unscrew • Three-Step Operation • 3-Ton Seal is Leak-and-Tamper-Proof • Low Center of Gravity • Compact Design • Weather-Protected Mechanism • Shielded Gauge • U.L.-Approved



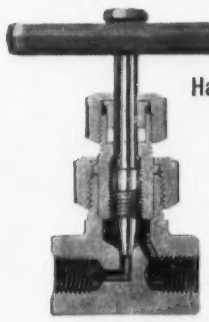
Kidde

Walter Kidde & Company, Inc.
1224 Main St., Belleville 9, N.J.
Walter Kidde & Company of Canada Ltd., Montreal — Toronto — Vancouver

▲ For more details circle NED-554 M8 on enclosed inquiry slip ▲

for dependable field service

SPECIFY AMERICAN® NEEDLE VALVES



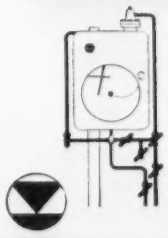
Handle the toughest meter manifold jobs and corrosive field services. Eliminate gland leaks.

Teflon-packed forged steel American® Needle Valves deliver year 'round dependable service—stand up under all conditions. Stainless or carbon steel precision machined valve bodies are ideally suited for welding. Stainless steel centerless-ground valve stem design makes it simple to repack valves under pressure.

Standard valves are design rated for pressures to 5,000 psi at 70°F. Upon request, assembled valves are hydrostatically tested to 10,000 psi (twice rated working pressure) and individually inspected. Valves are also furnished with graphite-impregnated asbestos packing for temperatures above 450°F.

Angle or straight patterns — screwed or union bonnets.

Ask your American Meter representative for full details.



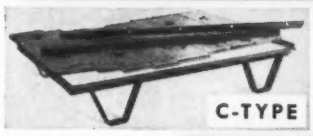
AMERICAN® METER COMPANY
INCORPORATED ESTABLISHED 1836

Executive Offices: Philadelphia 16, Pa. Sales offices in principal cities.

▲ For more details circle NED-555 M8 on enclosed inquiry slip ▲

IRONBOUND SKIDS

Full range of sizes, types, capacities, underclearances!



Bolted and welded construction of C-type skids feature easy deckboard replacement.

Ironbound — **IRONBOUND**

55 Hoffman Place • Hillside, N. J.

▲ For more details circle **NED-556 M8** on enclosed inquiry slip ▲

Fast but not loose

Rest assured, if your package is securely fastened with USS Gerrard Round Steel Strapping, it won't come loose under the roughest handling. USS Gerrard Round Steel Strapping is the *economical* way to get extra security in your tying operations. Get the details in our fact-packed, 36-page Blue Book of Packaging by writing to Gerrard Steel Strapping, 208 South La Salle Street, Chicago 4, Illinois.

USS and Gerrard are registered trademarks

Gerrard Steel Strapping Dept., U. S. Steel Supply Division of United States Steel USS

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LOOK! Here's how Spirolox

RETAINING RINGS

Save You Time — Effort — Money!

- ✓ **Save you hours of machining — hours of assembly time! Easy in — easy out.**
- ✓ **Save you extra lock parts!**
- ✓ **Save you space — insures neater assemblies!**
- ✓ **Save you dead weight.**

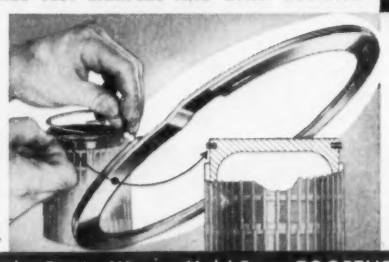
Spirolox has solved hundreds of industry's retaining problems, just like the Roll Lock Chucking Tool shown below—an external retaining application. Unique, 2-turn construction actually "friction locks" Spirolox into groove. No more keys, pins, collars. Assembly was completed quicker, easier; is more compact, neater, lighter. And Spirolox *always* provides a uniform shoulder.

SEND FOR FREE TEST SAMPLES AND DATA BULLETIN

Let us see a blueprint of your retaining problem.

Ramsay Corporation, a subsidiary of Thompson Products, St. Louis 6, Mo. Dept. F

U.S. Pat. No. 2,450,485 and Foreign Pats. Other pats. pend.

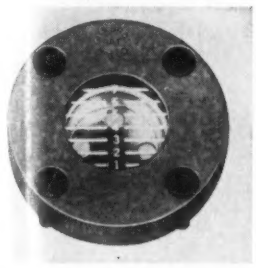


878

SPIROLOX—the Better Way to Hold Parts TOGETHER!

▲ For more details circle **NED-558 M8** on enclosed inquiry slip ▲

OIL GAGES
designed for gear cases



Instant checks of the oil level within transmissions or gear cases are possible with this series of screw-mounted oil gages. Standard line has five sizes with sight diameters from ¾ to 2 in. The plastic sight is offered with permanent markings or graduations to suit the application. Sight is backed with a cadmium plated reflector which clearly reflects the oil level, even in dim light. Mounting flange is fitted with an oil-tight gasket. Made by **Gits Bros. Mfg. Co.,** 1866 S. Kilbourn Ave., Chicago 23, Ill.

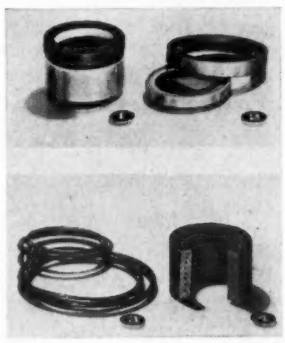
▲ For more details circle **NED-559 M8** on enclosed inquiry slip ▲

DECORATIVE FINISHES
for many industrial applications

Uniform pattern with good depth and definition are achieved with Reverse Hammer finish paint. The pattern does not wipe out when overspray is encountered on irregular shaped, hard-to-paint objects. Applicable to ferrous and nonferrous metals, the paint is available in baking and rapid air drying types in a wide range of dark and light colors. Pieces may be sprayed during different phases of production by different operators, yet retain uniform patterns. Second new finish is a "3-D" paint which offers sharply defined two-tone effects in splatter patterns. Use of a veiling gun is recommended for the first coat, but a conventional gun may be used for the second coat which can be applied before the first coat dries. Patterns range from embossed leather appearance to that of terrazo. When used as a one-color system, the finish resembles that of Fiberglas. Made by **P. D. George Co.,** Dept. ND, 5200 N. Second St., St. Louis 7, Mo.

▲ For more details circle **NED-560 M8** on enclosed inquiry slip ▲

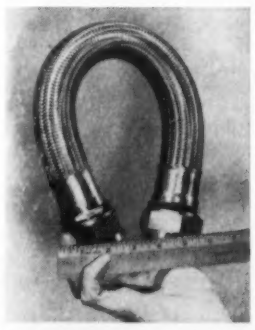
SEAL & GASKET MATERIAL
resists heat, oils, and solvents



Used successfully in military aircraft and missile applications, Viton polymer is now being used to make O-rings, packings, and oil seal elements, for use where resistance to heat, oils, solvents, and corrosive liquids is essential. Basic formulations range from 60 to 90-durometer hardness. It retains its useful elasticity for more than 2400 hr at 400° F dry heat temperature, and 1000 hr at 450° F. O-rings made from Viton perform satisfactorily at −65° F. Style 7263, rated 80 durometer, is an off-white formula for use in the food industry. All other styles are black. One formulation is suitable for making mechanical seal bellows, sheets, and molded and extruded shapes. Offered by **Garlock Packing Co.,** 429 Main St., Palmyra, N. Y.

▲ For more details circle **NED-561 M8** on enclosed inquiry slip ▲

HIGH TEMPERATURE HOSE
highly flexible sizes to 2 in.



Light in weight and possessing long life expectancy, Springfield 400 Teflon hose assemblies have a temperature range of at least −65 to 400° F. Low convolutions in the inner tube, made with Teflon and Fiberglas tape, give it good flow characteristics. Hose is available in diameters from ¾ to 2 in., and being highly flexible, has a minimum bend radius of three and one third times the equivalent tube size. When assemblies are bent below the minimum bend radius, the hose will flatten out, but returns to its original shape without damage when straightened. Zero-Motion braiding process eliminates elongation or contraction under operating pressures. Compression type end fittings are factory-swaged onto the hose. Made by **Titeflex, Inc.,** Hendee Street, Springfield 4, Mass.

▲ For more details circle **NED-562 M8** on enclosed inquiry slip ▲

DOES THE WORK OF

4 DRILL PRESSES

DRILLS—REAMS COUNTERSINKS COUNTERBORES

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With Quadrill you can use four drilling or cutting tools on one drill press by simply indexing for each tool. Precision built for rugged duty—long service. Specify make and size of drill press when ordering QUADRILL.

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1856 BUSSE HIGHWAY • DES PLAINES, ILL.

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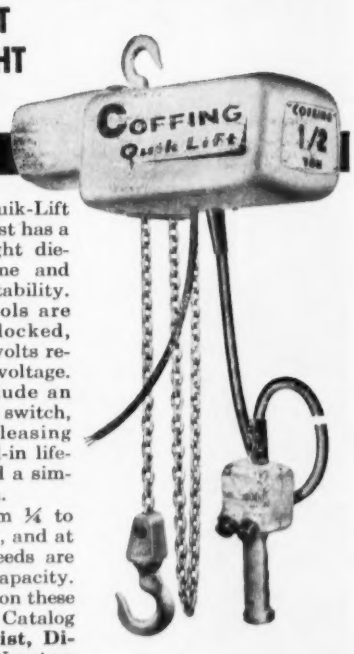
NEW Coffing Quik-Lift

ELECTRIC HOIST IS LIGHTWEIGHT BUT STURDY



The new Coffing Quik-Lift coil chain electric hoist has a strong but lightweight die-cast aluminum frame and housing for easy portability. Push-button controls are mechanically interlocked, and operate on 115 volts regardless of motor voltage. Other features include an easily-adjusted limit switch, instantaneously releasing V-type brake, sealed-in lifetime lubrication, and a simplified wiring system.

Models range from ¼ to two tons in capacity, and at least two lifting speeds are available in each capacity. For full information on these new hoists, write for Catalog AD-65. **Coffing Hoist, Division of Duff-Norton Company, 803 Walter Street, Danville, Ill.**

▲ For more details circle **NED-564 M8** on enclosed inquiry slip ▲

22.6% more air
PER POWER DOLLAR

By actual test, DeVilbiss air compressors deliver as much as 22.6% more air per power dollar. Efficiency like this combined with great care in manufacture and assembly are reasons why a DeVilbiss compressor pays for itself out of power savings alone. Full range of pressure. Types available from ½ through 15 h.p. Write today for full details.

DEVILBISS THE DEVILBISS COMPANY

Toledo, Ohio

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HAVE MANY ADVANTAGES ...MANY USES!

Use convenient, leakproof ELLISCO BRUSH TOP CANS for paints, pipe "dope", red lead, layout blue and your own products. Your servicemen, maintenance men, salesmen and customers will like these cans because they: SAVE TIME — brush fastened to can lid makes application easy; PREVENT WASTE — brush size is ideal for applying small quantities of liquids; INCREASE EFFICIENCY — they are easy to carry and always ready to use.

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BAldwin 3-3405

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PHILADELPHIA 40, PA.

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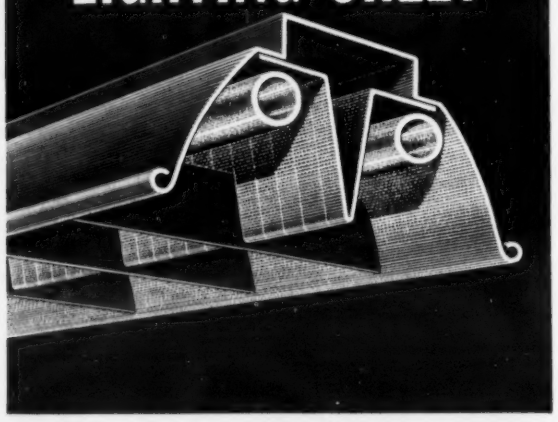
Make it of...

ALCOA LIGHTING SHEET



For the production of Alzak® Reflectors for lighting fixtures, Alcoa® Lighting Sheet is available through the Jobbing Division and Alcoa distributors. It is made in both diffuse and specular reflecting surfaces. The sheet has an Alzak finish, Alcoa's registered trademark for a unique treatment that produces excellent reflectivity and corrosion resistance. Call your nearest Alcoa sales office for more information on lighting sheet.

Alcoa's Jobbing Division can shake you loose on complicated or long-run jobs of practically any description.

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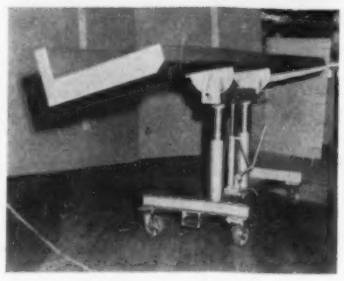
COMPANY_____
STREET ADDRESS_____
CITY_____ STATE_____

▲ For more details circle NED-567 M8 on enclosed inquiry slip ▲

STRIP STOCK HANDLER
has capacity of 1000 lb



This 1000-lb capacity hydraulic strip stock handler features an inclinable 20-in. wide by 8 or 10-ft long top with a 5¾-in. high back flange. Top will adjust from horizontal to a 30-degree angle to suit the inclinable punch press with which it is used. Table is elevated from 32 to 43 in. above the floor by a hand-operated pump. Four 5-in. swivel casters are standard and a floor lock and foot-operated pump are optional. Made by **Lexco Engineering & Mfg. Corp.**, 20 W. Chestnut St., Souderton, Pa.

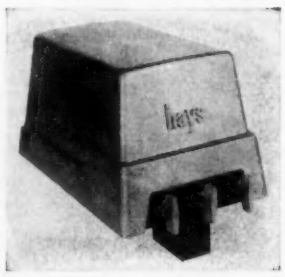
▲ For more details circle NED-568 M8 on enclosed inquiry slip ▲

SPRING PIN KIT
contains over 700 Rollpins

Packaged in a compartmented plastic box, the No. 300 Rollpin kit contains over 700 carbon steel spring pins in diameters from 1/16 to ½ in. Individual pins range in length from 3/16 to 3¼ in. The assortment is most practical for machine shops, repair work, or for prototype or design work. The Rollpin is a slotted, chamfered, tubular spring pin heat treated for maximum strength and serves as a taper pin, straight pin, set screw, rivet, dowel, hinge pin, cotter pin, or stop pin. Kit is priced at $12. Made by **Elastic Stop Nut Corp. of America**, 2330 Vauxhall Rd., Union, N. J.

▲ For more details circle NED-569 M8 on enclosed inquiry slip ▲

FLOW TRANSMITTER
measures differential pressure flow



Flow, liquid level, or any other variable which is a function of differential pressure is measured by Model 245 bellows-actuated flow transmitter. Unit is liquid-free, with the only sensing unit being the single element bellows. Transmitter is available in standard industrial ranges from 20 to 600 in. water differential and is designed for use with the new Hays universal electronic recorder. The compact unit can be mounted on a convenient vertical section of 2-in. pipe. Wall mounting bracket is also available. Made by **Hays Corp.**, 980 Eighth Ave., Michigan City, Ind.

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• THREADED PARTS
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Fluid-Feed
ROTARY TABLE

Feeds parts fast! Combines with other stock units for easy, cost-cutting automation.

Write for complete catalog today!

THE MEAD MAN CAN HELP YOU CUT COSTS Now!

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Write Commercial Shearing & Stamping Co., Dept. J-49, Youngstown 1, Ohio.

COMMERCIAL
shearing & stamping

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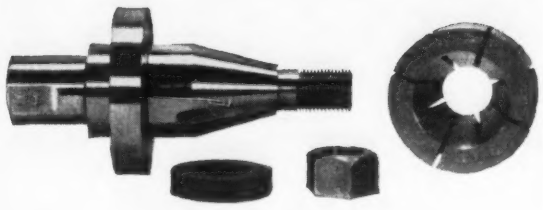

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"Lok-Tite" series expanding mandrels with quick-taper design give automatic release of workpiece. They are used between centers, chucked, face plate or rotary table mounted. Threaded nut or drawbar clamped. Precision of .0004" T.I.R. is guaranteed. Twelve arbors with a wide range of sleeves will handle all holes from ½" to 15" I.D.

Send for free catalog giving complete line, specifications and prices

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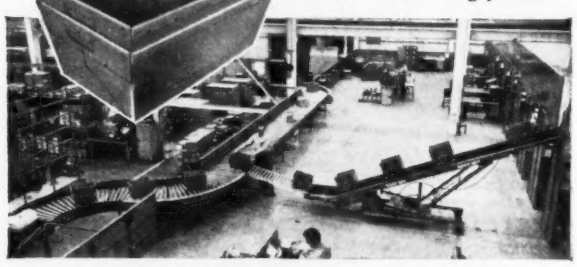
This uncommon carrier . . .

is rapidly becoming the common answer to materials handling problems



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We make many standard size tote boxes . . . nesting, stacking and vertical sided . . . but we'll custom-make any box your product or use calls for.

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CANTON 6, OHIO
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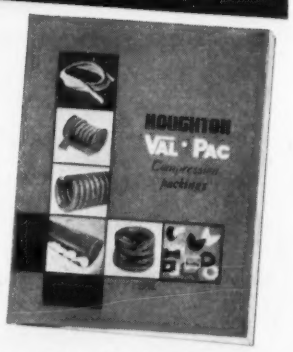
VAL • PAC

A new name in Compression Packings by Houghton



A pre-selected, top-grade line of rod and sheet packings backed by Houghton's hydraulic and pneumatic packing know-how.

Write today for your copy of this NEW catalog on the NEW VAL-PAC line of compression packings. E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

VAL-PAC COMPRESSION PACKINGS

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PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO • TORONTO
Ready to give you on-the-job service

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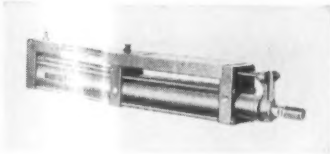
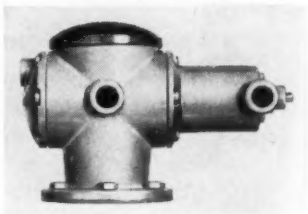
AIR-HYDRAULIC UNIT has varied combinations of feeds



Any combination of rapid advance, feed, and skip feed can be set up by two easy-to-reach cams of this air-hydraulic unit. A built-in bypass valve with traveling rods allows rapid advance to any point in the stroke, controlled rate of feed for any distance, pick-up of rapid feed, and return to controlled rate. This cycle can be repeated several times during the stroke by setting the bypass valve cams. The unit combines an air cylinder, hydraulic control cylinder, and valving. Usable on milling machines, lathes, drill presses, packaging machinery, assembly operations, and other equipment, it is made with 2, 4, 6, and 8-in. stroke lengths. The 2 and 3-in. bores offered provide thrusts of about three and seven times air line pressure, respectively. Made by **Electro-Mechano Co.**, 261 E. Erie St., Milwaukee 2, Wis.

▲ For more details circle **NED-577 M8** on enclosed inquiry slip ▲

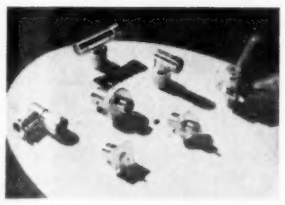
VALVE POSITIONER for cylinder, diaphragm actuators



Model J top-mounted integral valve positioner, usable on cylinder and diaphragm type actuators, is capable of an infinite number of stroke lengths up to 8 in. in any combination of control forms through a variety of models. Linearity exceeds 1 per cent, regardless of stroke length. Positioner combines force-balance design with a pilot-operated relay valve, responding to signal changes as low as 0.001 psi. Increasing or decreasing outputs may be applied to either the top or bottom of an actuator in a single mounting of the positioner. Zero adjustment is readily accessible. Unit is enclosed and weatherproof. Made by **Conoflow Corp.**, Dept. D-5, 2100 Arch St., Philadelphia 3, Pa.

▲ For more details circle **NED-578 M8** on enclosed inquiry slip ▲

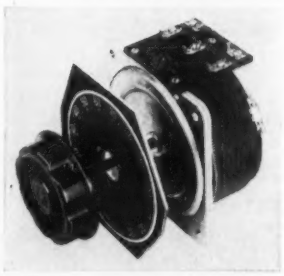
COAXIAL CONNECTORS miniature units are thread-coupled



Beryllium copper shield and female contacts, gold plated contacts, and thread coupling for positive locking are features of TM Series of lightweight, miniature coaxial connectors. They are designed to eliminate electrical noise, permitting reception of weak, low-level signals. Connectors are matched electrically for 50-ohm impedance and some designs are available for 70 and 93-ohm cables. Units withstand 500 v rms. Plugs, jacks, receptacles, adapters, and caps are offered in various sizes and styles for cable from 0.070 to 0.210-in. OD. Made by **General RF Fittings, Inc.**, 702 Beacon St., Boston 15, Mass.

▲ For more details circle **NED-579 M8** on enclosed inquiry slip ▲

AUTOTRANSFORMERS redesigned units rated at 20 amp



Heat transfer between coil and base, brush and radiator has been improved in redesigned Type W20 Variac autotransformers. Duratrak contact surfaces minimize brush-track deterioration under adverse environmental or load conditions. Basic uncased models are available for 115 and 230-v service and are rated at a maximum of 3 and 2.4 kva, respectively. Cased models have knockouts for conduit or armored cables. Case front is easily removed for access to terminals, mounting holes, and brush. Two portable models include a three-wire attached cord and plug, output receptacle, switch, and overload circuit breaker. All W20 models can be connected to provide a 17 per cent over-voltage output if desired. Two and three-gang assemblies are available cased and uncased, and motor drives can be supplied for all models. Made by **General Radio Co.**, 275 Massachusetts Ave., Cambridge 39, Mass.

▲ For more details circle **NED-580 M8** on enclosed inquiry slip ▲

ELIMINATE DEADLY SLIPPING HAZARDS with A.W. ALGRIP

ALGRIP, world's only abrasive rolled steel floor plate, provides super-safe footing under the most hazardous slipping conditions, including those caused by oil, water and grease—on flat or *inclined surfaces.*

Thousands of abrasive particles, which have been rolled—*not coated*—to a controlled depth as an integral part of steel plate, give powerful gripping action. Wear and tear exposes more abrasive.

Make a test installation and watch accident and insurance rates go down. ALGRIP fabricates easily and gives many years of economical service under heavy use. For complete information write on company letterhead to Dept. AL-E28.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—*approved for safety by Underwriters' Laboratories*

ALAN WOOD STEEL COMPANY
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Other Products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)

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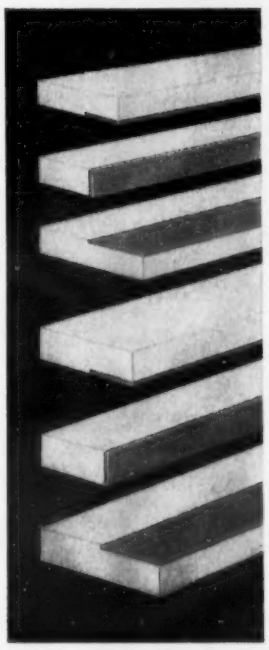
O-KNI-CO MACHINE TOOL news
PRODUCTION FACTS THAT INCREASE YOUR PROFITS
PUBLISHED BY THE OHIO KNIFE CO., CINCINNATI, OHIO

Die Builders save up to 50% using new O-KNI-CO composite die sections

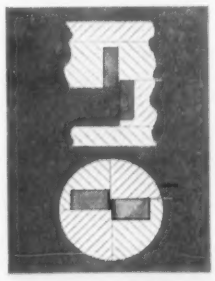
Six new sections now available



Companies building dies for both consumer and industrial products report O-KNI-CO ready-made die sections not only save up to 50% over the cost of home-made die sections, but offer many ways to improve die building. These savings are achieved because O-KNI-CO sections can be purchased at an established price. You buy what you need to your specifications. They are carried in stock in lengths up to 125". They are ready to use with cutting or forming edge hardened, machined and ground. Specially hardened tool steel (Rockwell 64-66) is bonded to a soft steel backing, quickly drilled for dowel or screw holes.

These six new sections make a total of seventeen O-KNI-CO sections now available to die builders. They can be used for cut-off, blanking, forming or flanging . . . draw and pinch dies, heels, back-up plates or as guides and hold-down gibs.

Use coupon below for Data Sheets illustrating the varied applications of O-KNI-CO composition die sections.



◀ **Typical Flange - die applications using O-KNI-CO composite die sections.**

FREE THE OHIO KNIFE CO. Dept. 86-H
Cincinnati 23, Ohio

Gentlemen: Please send me FREE Data Sheet on O-KNI-CO composite die sections.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ STATE_____

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- Hot Water Systems
- Floors, Walls, Ceilings
- Refrigerated Coils
- Insulation
- All Other Low Temps.

You can accurately read any low surface temperature with the Alnor Type 2300 Surface Pyrometer—in 3 to 5 seconds.

Take this rugged, portable instrument to any job in the field and see how performance to laboratory standards can save invaluable time in balancing out a system...save the money lost on call-backs. Large 6" mirrored scale is direct reading, no conversion...no errors in readings...1° per division. Precision jeweled movement is protected against abuses of portable service by sturdy walnut case. Comes complete with matched thermocouple and lead ready to use on your next trip out. Send for Bulletin 4257. Tear out this ad and mail on your letterhead to: Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Illinois.

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

Alnor

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NEW...
an advanced concept in metering small flows

The Brooks Sho-Rate "50" is a new design idea in purge meters. It offers the complete interchangeability, dependability and structural strength that's been needed for a long time.

- *Slip-out Tubes*
- *Side-plate Construction*
- *Rotatable End-fittings*

The Sho-Rate "50" Purge Meter gives all this... at a very low cost. *Send for complete facts.*

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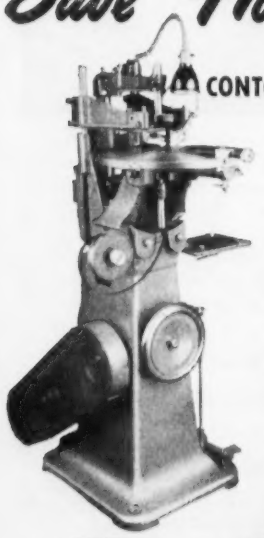
WRITE FOR BULLETIN 135

BROOKS and SHO-RATE are trade-names

▲ For more details circle **NED-589 M8** on enclosed inquiry slip ▲

Save Hours in tool rooms and die shops with CONTOUR SAWING AND FILING



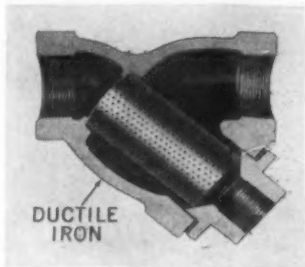
You can save real time and money in the production of parts for jigs and fixtures, dies, gages, templates and special machine production by using an Oliver of Adrian contour sawing and filing machine.

The Oliver is so simple to operate that all sawing, filing and lapping can be handled by an ordinary mechanic—saving a skilled die maker's costly time. Parts can be shaped to dimension faster, more accurately with no hand filing or semi-finishing operations. Available in five types – bench or pedestal. Write today.

OLIVER of ADRIAN
OLIVER INSTRUMENT COMPANY
1450 E. Maumee St. • Adrian, Michigan

▲ For more details circle **NED-590 M8** on enclosed inquiry slip ▲

DUCTILE IRON STRAINERS for 600-psi steam service



Capable of withstanding pressures of 600 psi at 650° F, this line of pipeline strainers is made of ductile (nodular) iron in 3/8 to 2-in. standard pipe sizes. Ductile iron will not bend or twist, nor will it break in case of fire or explosion. Strainers reportedly offer 80 per cent of the strength of cast steel at roughly half the price. Made by **Strong, Carlisle & Hammond**, Strong Steam Specialties Div., 508 Sandusky St., Conneaut, Ohio.

▲ For more details circle **NED-591 M8** on enclosed inquiry slip ▲

STERILE-INDICATING LABELS for research and laboratory work

Particularly suited for operations involving sterilization in autoclaves, Time autoclave self-sticking vinyl-coated labels afford proof of sterility. Heat-sensitive ink imprint "sterile" becomes visible only when product to which label is attached is subjected to a complete autoclave sterilization cycle of 15 minutes at 250° F. Accidental activation is impossible. Labels also serve to identify product through a standard visible imprint, act as seals, and show number and size of articles. A wide selection of standard and custom legends is offered. Furnished in 500-in. to 60-yd rolls of 117 to 1000 labels, they are easily dispensed and applied. Sizes range from 1/2 x 2 1/4 to 2 x 4 1/2 in. Made by **Professional Tape Co.**, 355 Burlington Ave., Riverside, Ill.

▲ For more details circle **NED-592 M8** on enclosed inquiry slip ▲

ABRASIVE WHEEL fast-cutting depressed center type

Rigid, resinoid bond type Double XX abrasive wheel for weld grinding and general off-hand use on portable disc type sanders and right angle grinders features a depressed center. Made with a maximum amount of cutting particles and doubly reinforced, wheel is extremely fast cutting. The Double XX falls between the Simonds' Fibrex wheel for light jobs and the Simex wheel for heavy-duty use. Made by **Simonds Abrasive Co.**, Tacony & Fraley Streets, Philadelphia 37, Pa.

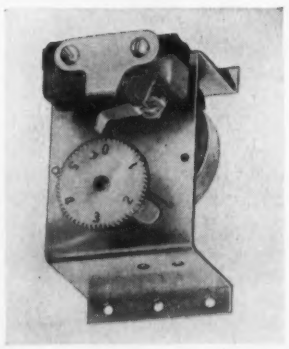
▲ For more details circle **NED-593 M8** on enclosed inquiry slip ▲

SANDER-PLANE for use on wood, plaster, plastics

Abrasive surface of the Perma - Grit sander-plane is of tungsten carbide grits copper-bonded to a steel blade. Plastic handles are shaped like those of a regular plane with a two-handed grip. Tool can be used to remove wood, plaster, plastics, or other composition materials, but is not recommended for use on metals. It cuts on both forward and backward strokes, or in a circular motion. Filing, sanding, planing, shaping, or beveling operations can be performed. Made by **Skil Corp.**, 5033 Elston Ave., Chicago 31, Ill.

▲ For more details circle **NED-594 M8** on enclosed inquiry slip ▲

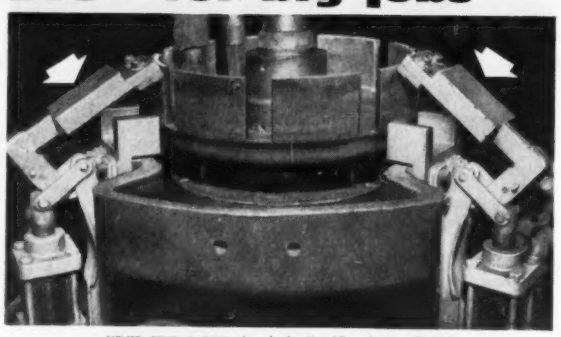
ADJUSTABLE TIME DELAY is synchronous motor driven



Adjusted by merely turning the indicator lever to the desired position on the notched dial, Model FR synchronous - motor-driven time delay relay can be supplied to operate on any standard voltage. Timing ranges of 0-15 to 0-120 sec are available, and contacts are rated 20 amp, 480-v, noninductive. Made by **Zenith Electric Co.**, Dept. NDC, 152 W. Walton St., Chicago 10, Ill.

▲ For more details circle **NED-595 M8** on enclosed inquiry slip ▲

BIG--for big jobs



NEVER SEND A BOY—here's the Knu-Vise clamp AO-200.

LAPEER CLAMPS FOR ARC WELDING

In the plant of a midwestern automotive parts manufacturer, air operated Knu-Vise clamps are an important part of a work holding fixture for arc welding. Shown is the operation where center hubs are welded into the high clutch splitter housing for automatic truck transmissions.

No job for a panty-waist, the husky Lapeer clamps have to grab securely—hold rigidly—let go instantly. They are part of a family of more than 150 models of clamps and pliers designed to do a tremendous number of holding jobs. Some are air-operated, others hand operated. All of them do workhorse jobs in industry holding big parts, small parts, unwieldy parts. Write today for more information.

Manufacturers of over 150 models of manually and air-operated clamps and pliers

KNU-VISE PRODUCTS **LAPEER MANUFACTURING CO.**

3062 DAVISON ROAD
LAPEER, MICHIGAN

WESTERN DIV.: PECK and LEWIS CORPORATION
4436 Long Beach Ave., Los Angeles 58, Calif., ADams 3-7146
CANADIAN DIV.: HIGGINSON EQUIP. SALES LTD.
1131 Pettit Road, Burlington, Ontario

▲ For more details circle **NED-596 M8** on enclosed inquiry slip ▲

FICTION and FACT

FICTION: Conversion From Dry Booth to R P Paint Arrester Equipped Paint Spray Booths is Complicated.

FACT: R P Paint Arrestors are Basically Air Filters and are as Easy as Filters to install.

Photo Courtesy Consolidated Freightways, Chicago

RP® **PAINT ARRESTORS**

R P Paint Arrestors require no special construction and can be installed in any dry-type spray booth...quickly and simply. They can be mounted in vertical, horizontal or "V" banks... and require no plumbing, pumps nor special wiring. Maintenance costs are low, too, involving only the replacement of economical Paint Arrestors. To reduce down-time, save floor space, increase paint spray booth efficiency, write for complete information on R P Paint Arrestors.

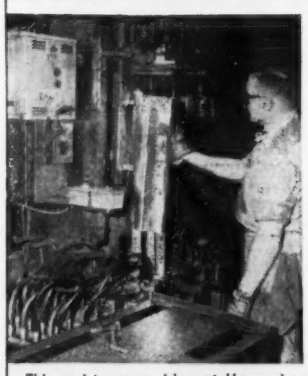
Products of Research RP

RESEARCH PRODUCTS Corporation
Dept. 32 Madison 10, Wis.

▲ For more details circle **NED-597 M8** on enclosed inquiry slip ▲

Aeroquip Hose Lines Give Long Service on Plant Equipment

at Hayes Industries, Inc., Jackson, Michigan Plant



This resistance welder at Hayes has 48 Aeroquip Hose Lines giving long, trouble-free service conveying hydraulic fluids.

Use of Aeroquip Hose Lines has increased service life of hydraulic and air lines on equipment at Hayes Industries, Inc. All replacement lines are made quickly in the plant using Aeroquip Hose and Reusable Fittings. Down-time is minimized and hose stocks are simplified. Call your Aeroquip Distributor for full money-saving story. He's listed In your Yellow Page Phone Book.

Aeroquip

AEROQUIP CORPORATION, JACKSON, MICHIGAN
INDUSTRIAL DIVISION, VAN WERT, OHIO • WESTERN DIVISION, BURBANK, CALIFORNIA • AEROQUIP (CANADA) LTD., TORONTO 19, ONTARIO
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

▲ For more details circle **NED-598 M8** on enclosed inquiry slip ▲

Bench Tops

LAMINATED HARD MAPLE

Steel bench bases, legs and drawers available for use with Tolco Tops. Write for complete illustrations and prices.

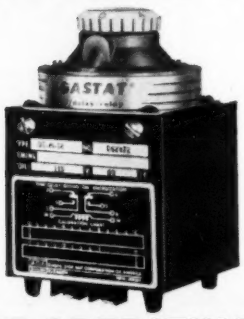
ESTABLISHED 1894

THE TOLERTON COMPANY

265 N. FREEDOM AVE · ALLIANCE, OHIO

For more details circle **NED-599 M8** on enclosed inquiry slip

NEW AGASTAT®



HAS LONGER OPERATING LIFE

The Agastat time/delay/relay has been completely re-designed, inside and out, to make every moving part last longer and operate more reliably. Here are some other important advantages:

- Dial adjustment for ease and accuracy
- Five timing ranges, covering an overall range of from 0.08 seconds to 15 minutes
- Timed intervals remain the same through repeated readjustments
- Integral wiring diagram and calibration plate
- Measures only 4-9/16 x 2-9/16 x 2-5/8"
- All contacts are flexible contacts
- Contacts are larger for fast heat dissipation

Write for details and application engineering assistance to Dept. A32-125.

AGA DIVISION

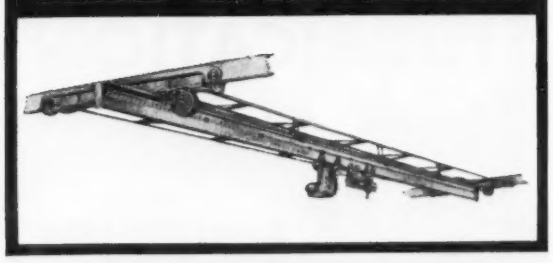
Elastic Stop Nut Corporation of America

1027 Newark Avenue, Elizabeth, New Jersey

Pioneers in Pneumatic Timing

For more details circle **NED-600 M8** on enclosed inquiry slip

LONG SPAN CRANE



- **Needs very little head-room**
- **Straddles wide bays**

American MonoRail's long span crane hugs the ceiling . . . lets you handle loads up to 10-tons in a wide bay . . . even under a low roof. Easy to operate by push button control from the floor.

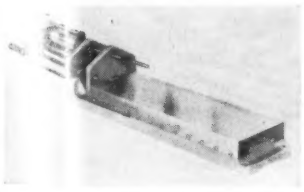
Write for Bulletin C-1.

AMERICAN MONORAIL

13116 ATHENS AVENUE
CLEVELAND 7, OHIO

For more details circle **NED-601 M8** on enclosed inquiry slip

PACKAGED SLIDE ASSEMBLY
air unit has built-in feed control



Time and money can be saved in assembling special machines with this air-powered heavy duty slide assembly which has smooth, accurate hydraulic feed control. Packaged unit includes two built-in Micro switches to permit interlocking slide operation with other functions. Stocked slide is offered with working surfaces of 4 x 12, 6 x 16, and 8 x 24 in.; maximum strokes of 4, 6, and 8 in.; and maximum feed strokes of 2, 4, and 6 in., respectively. An adjustable hydraulic check may be used to regulate slide speed during any desired portion of the feed stroke. The air control valve which starts operation may be any of several types for 110 or 8-v service, the latter offered with a transformer for 115, 230, or 440 v. Adjustable air speed valves restrict the air cylinder speed in both directions. Made by **Russell T. Gilman, Inc.**, 623 Beech St., Grafton, Wis.

For more details circle **NED-602 M8** on enclosed inquiry slip

PLATFORM LIFT
lifts 400 lb, turns 360 degrees

Maintenance and cleaning of lighting fixtures, cleaning and painting of walls, and window and stockroom operations are simplified with the Hydro-Hi platform lift. Completely controlled from its 6-ft platform, unit will lift up to 400 lb and turns 360 degrees in either direction. It is easily steered, moved, and braked with the pushbutton Hydro-Power wheel. Lift heights up to 25 ft are available. Unit is powered by heavy duty battery with built-in charger. Made by **Stratton Equipment Co.**, 2030 E. 105th St., Cleveland 6, Ohio.

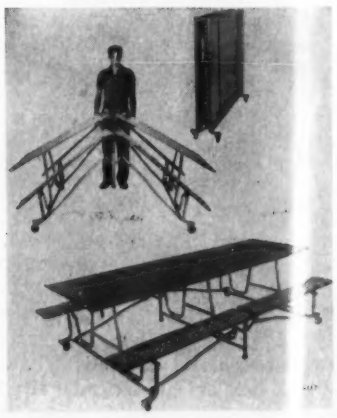
For more details circle **NED-603 M8** on enclosed inquiry slip

BARREL & DRUM VENT
has automatic valve, fusible plug

Automatic relief from interior vapor build-up is provided by an automatic valve in this drum end vent which opens at 5 psi. A fusible plug melts at 135° F for quick emergency pressure relief in the event of fire. The vent is placed in the 2-in. bung opening located in the head when drums are placed in a horizontal position. A thick gasket seal provides a leakproof connection. A manually operated vacuum relief valve provides full and free flow when withdrawing liquids. Made by **Protectoseal Co.**, 1920 S. Western Ave., Chicago 8, Ill.

For more details circle **NED-604 M8** on enclosed inquiry slip

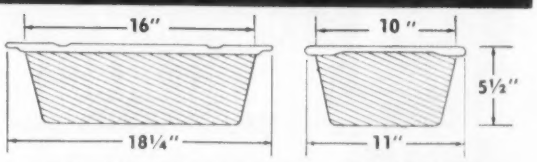
PORTABLE LUNCH TABLE
one-fold type in 6, 7, and 8-ft sizes



One-fold action of the "space saver" portable lunch table with benches facilitates setup for eating or foldup for storage. When folded, it can be wheeled anywhere on its casters. Table is available in 6, 7, and 8-ft lengths. Ten folded tables will nest in only 5 x 7½ ft of space. Heavy 1-in. seamless steel tubing understructure is plated with Zinc Irydite. Benches and tops are ¾-in. plywood covered with 1/16-in. Melamine plastic and have a sanitary plastic edge molding. Made by **Haldeman-Homme Mfg. Co.**, 2580 University Ave., St. Paul 14, Minn.

For more details circle **NED-605 M8** on enclosed inquiry slip

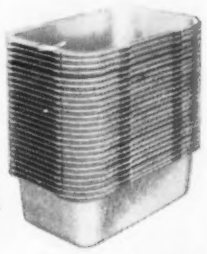
Bathey PAK-N-STAK TOTE PAN



A new lightweight, leakproof, drawn steel Tote Pan designed to fit the needs of production shops of all types. Minimum side taper and small bottom radius maintains full cubic content capacity, (825 cu. in.).

Weight 5 Pounds
19 Ga. Steel

No unsightly, cumbersome collection of pans when "PAK-N-STAK" moves in. There are actually 24 nested pans shown in photo to the right.



MBC

Crosstacking, with pans locked in both directions, is accomplished by the embossed bottom and depressions in the lip edge. Contents remain visible at two points for visual identification.

DEALERS IN PRINCIPLE CITIES

B-11

BATHEY MFG. CO.
100 S. MILL STREET PLYMOUTH, MICH.

For more details circle **NED-606 M8** on enclosed inquiry slip

everything you need— to fasten anything with nuts

APEX NUT RUNNING TOOLS

Apex builds tools to drive all these types of nuts. For most applications, you can choose the correct Apex tools from the most complete line ever offered. For special applications, just ask Apex—the authority on fastening—for practical assistance in solving your problem.

Catalog 30-A
Nut Running Tools to ⅝" sq. dr.

Catalog 30-B
Nut Running Tools from ¾" sq. dr.

1933 • A Quarter Century of Service to Industry • 1958

Ask **APEX** *for the answer to your fastening problem!*

THE APEX MACHINE & TOOL COMPANY
1046 S. Patterson Blvd., Dayton 1, Ohio

For more details circle **NED-607 M8** on enclosed inquiry slip

To meet your needs for variable speeds

ASK FOR
CLEVELAND SPEED VARIATOR
BULLETIN K-200

THIS unique variable speed drive gives you infinitely variable, stepless speeds up to 9:1 (from ⅓ to 3 times input speed). Precise adjustment gives instant, smooth speed change by manual, automatic or remote control. Simple construction, compact, quiet running. No belts, no complicated linkage. Thousands in use.

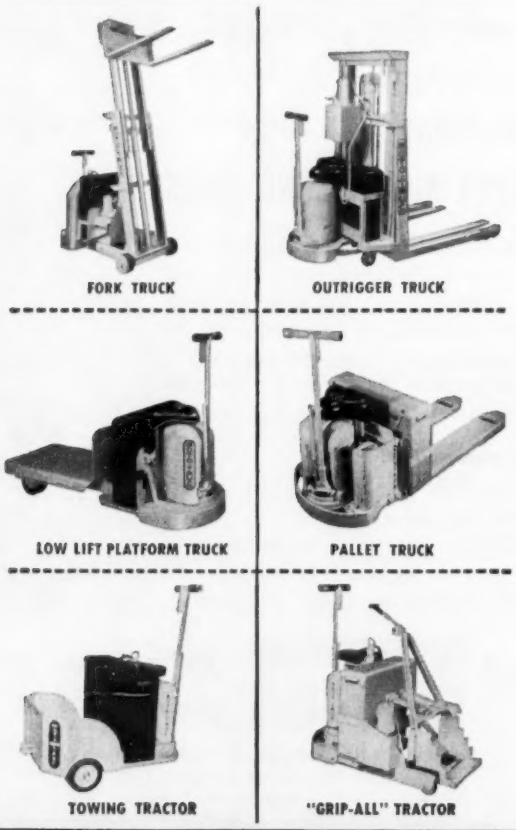
THE CLEVELAND WORM & GEAR COMPANY
Speed Variator Division, 3283 E. 80th St., Cleveland 4, Ohio
Sales Representatives in all major industrial markets

For more details circle **NED-608 M8** on enclosed inquiry slip

Write for new Safety Switch Bulletin
Square D Company, 6060 Rivard Street
Detroit 11, Michigan

NOW... EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE
SQUARE D COMPANY

▲ For more details circle NED-609 M8 on enclosed inquiry slip ▲



Which MOTO-TRUC "Walkie"* Would You Choose For Your Handling Job?

■ Naturally, you would choose the model that provides the most efficient handling. Your decision will be a simple matter of cost vs. performance.

To assure efficient handling, MOTO-TRUC has developed a wide range of models to meet every handling need. With more than 50 standard and special models to choose from, you can always be sure of outstanding performance.

Equally important, MOTO-TRUCS cost less to buy and operate. You can buy MOTO-TRUCS at prices well below those of competitive models. Yet, in spite of their lower initial cost, Moto-Trucs cost less to operate and maintain.

As the world's largest "Walkie" truck manufacturer, MOTO-TRUC offers you more handling performance for every handling dollar.

When you're buying a money-saving MOTO-TRUC let your local MOTO-TRUC handling engineer help you select the most efficient model for your job.

* *Rider type Moto-Trucs are also available in these same basic models.*

WRITE FOR MOTO-TRUC'S GENERAL CATALOGS—56W on "Walkie" models; 56R on small rider models.

Largest Exclusive Manufacturers of "Walkie" and "Ride-A-Man" Trucks

The MOTO-TRUC Co.
1961 EAST 59TH STREET • CLEVELAND 3, OHIO

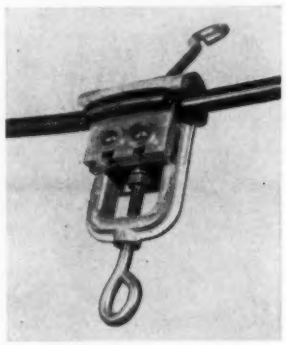
▲ For more details circle NED-610 M8 on enclosed inquiry slip ▲

CORRUGATED PARTS TRAYS
reusable type, relatively low cost

This versatile corrugated containerboard tote tray is designed to hold and transport assembly line components. Supplied completely assembled, trays are lightweight, can be nested, and will not slip. Parts are held firmly in place by a die-cut pad that fits into tray bottom. Openings of any size and shape can be cut in this pad. Tray can be printed with side instruction reading "reusable tray—do not destroy." Made by **Fort Wayne Corrugated Paper Co.**, 130 E. Douglas Ave., Ft. Wayne 1, Ind.

▲ For more details circle NED-611 M8 on enclosed inquiry slip ▲

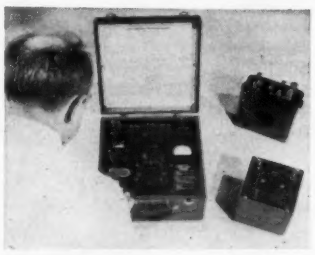
INSULATION REMOVER
strips a 2½-in. length at one time



A 2½-in. length of polyethylene, polyvinyl chloride, rubber, or neoprene insulation with from 3/64 to 12/64-in. walls can be stripped from conductors ranging from No. 2 stranded to 4/0 ACSR with this Penn - Peeler. Tool uses individual, interchangeable, cutter blades for each conductor and insulation combination. It is hooked over the insulation, tightened up by hand until stop is reached, then rotated around the conductor. Insulation "chip" falls away exposing the bare conductor. Stripping is performed without injury to conductor. Made by **Penn-Union Electric Corp.**, 315 State St., Erie, Pa.

▲ For more details circle NED-612 M8 on enclosed inquiry slip ▲

AC VOLT AMMETER
measures voltages and currents in the 20 to 20,000-cps range

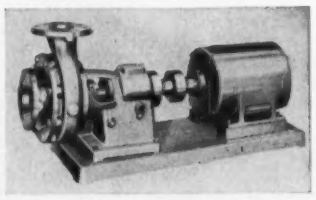


Alternating currents and voltages in the audio frequency range of 20 to 20,000 cps can be measured accurately within ±0.05 per cent with the Hermach - Englehard Transfer volt - ammeter. Instrument can be used to check the accuracy of lab and portable standard instruments for electrical, electronic, aircraft, and instrument manufacture.

It has a current range of 50 ma to 5 amp and a voltage range of 7.5 to 300 v, both of which can be extended through the use of shunts and multipliers. The portable, 25-lb instrument is built into a carrying case. It operates on a thermal matching principle as indicated by a galvanometer pointer about a null balance position. Made by **Charles Engelhard, Inc.**, 850 Passaic Ave., East Newark, N. J.

▲ For more details circle NED-613 M8 on enclosed inquiry slip ▲

CENTRIFUGAL PUMPS
standardized single-stage units



Discharge of the LP Series of standardized single-stage centrifugal pumps can be placed at any position by rotating the casing around the shaft center. Casings are of the centerline discharge type which simplifies application. The standardized pumps bear the ASA preferred numbers to indicate important linear dimensions and other pump characteristics. Standard closed type impellers are cast iron, with bronze optional. They are statically and hydraulically balanced and have double wear rings. Choice of stuffing box or mechanical seals is given. Pumps are available with a cooling jacket for temperatures to 320° F. Standard working pressure is 125 psi and standard temperature is 240° F. Line includes 41 sizes rated at 10 to 3000 gpm with heads from 10 to 250 ft. Made by **Taco Heaters, Inc.**, 1160 Cranston St., Cranston 9, R. I.

▲ For more details circle NED-614 M8 on enclosed inquiry slip ▲

NEW Snap-on® MAGNETIC SOCKETS last 10 times longer

Cutaway showing socket, magnet, self-tapping screw. Socket sizes: ¼-in. drive for ¼, 5/16, ⅜-in. sockets; ⅜-in. drive for 5/16, ⅜, 7/16, ½-in. sockets; ½-in. drive for 7/16, ½-in. sockets.

On actual customer test, this new *Snap-on* socket drove 112,320 self-tapping screws. On the same job, a competitive socket wore out after driving only 10,530 screws.

Re-use your magnets—Save up to 50%

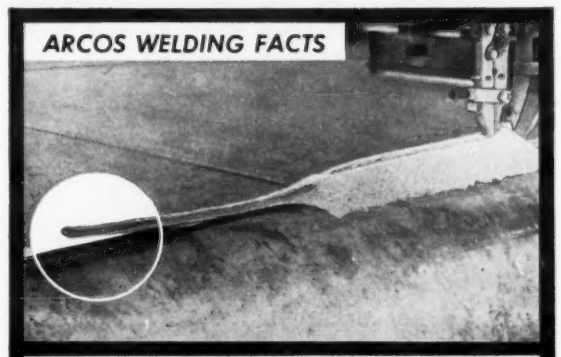
You can get these long-life sockets without the magnets. Just tap magnet out of the worn-out socket — insert it in the new socket with an inexpensive *Snap-on* magnet inserter. Cut your costs by 50 percent.

Ask your Snap-on man or write us direct.

SNAP-ON TOOLS CORPORATION
8110-L 28th Avenue • Kenosha, Wisconsin

▲ For more details circle NED-615 M8 on enclosed inquiry slip ▲

ARCOS WELDING FACTS



How to Produce Submerged Arc Welds with "Self Removing" Slag

With any of the new Arcosite Bonded Fluxes, the *slag breaks clean* — from the weld — *as it cools*. This means a dramatic reduction in weld cleaning time — an important cost-saving factor in welding stainless and low alloy steels by submerged arc welding. Another saving with Arcosite Flux comes from the small amount of Flux *consumed* per foot of deposited weld metal. For best results, specify Arcos *welding quality* bare wire, Arcosite's companion product.

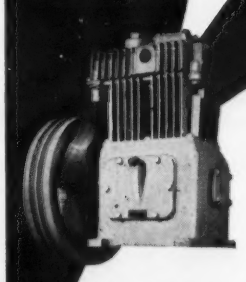
FREE BULLETIN ON REQUEST

Send for this additional information. Full Application data on five new Arcosite Bonded Fluxes.
Arcos Corporation, 1500 S. 50th St., Philadelphia 43, Pa.

ARCOS | Filler Metal Specialists

▲ For more details circle NED-616 M8 on enclosed inquiry slip ▲

LUBRICATION



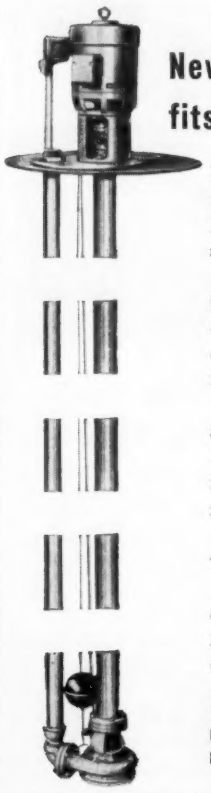
Something LESS for you to think about with a Quincy COMPRESSOR

Let oil pressure fall too low for *any* reason and the Quincy Compressor with Safe-Q-Lube unloads automatically, warning the user. The same system that guards the bearings prolongs motor and belt life, too, by providing loadless starting and free-rolling stops. Authorized parts and service depots from coast to coast.

SEND FOR CATALOG

Quincy COMPRESSORS
QUINCY COMPRESSOR CO.
DEPT. NED-1258, QUINCY, ILL.

▲ For more details circle NED-617 M8 on enclosed inquiry slip ▲



New adaptable sump pump fits any pit from 2′-20′ deep

Here's a new sump pump that's easily tailored to your exact needs—Goulds Fig. 3171 heavy-duty vertical centrifugal sump pump.

You can get it in 6-inch increments, from 2- to 20-foot lengths to accommodate most pits. And when you want to change pit depth or pump ratings, you merely replace necessary parts *in the field.*

Other "custom" features you get at a standard price:

1. Interlocking fits for permanent alignment.
2. External adjustment of impeller clearance.
3. Sealed-in, easy-to-replace upper bearing.

Single and duplex units available for wet and dry pits.

Vapor-proof construction upon request. Capacities to 1080 GPM, heads to 290 ft. For details, see your Goulds dealer or write:

GOULDS PUMPS, INC.
Dept. NED-12 Seneca Falls, N. Y.
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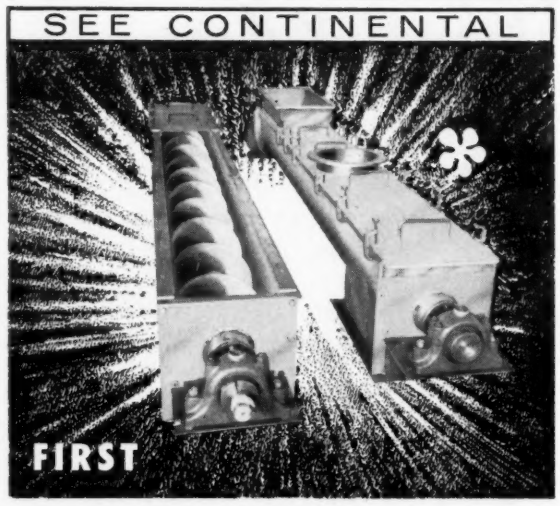
SEE CONTINENTAL



FOR *Screw Conveyors*

Continental's wide experience in manufacturing special and standard screw conveyors and screw elevators is available to assist in your planning.

Custom Made Stainless Steel Screw Conveyor.

CGC
INDUSTRIAL DIVISION
Continental Gin Company
BIRMINGHAM, ALABAMA
ATLANTA • DALLAS • KNOXVILLE • MEMPHIS • MOBILE • NEW YORK 17

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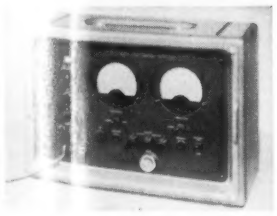
VIBRATION METER measures distance and vibration using a noncontacting probe

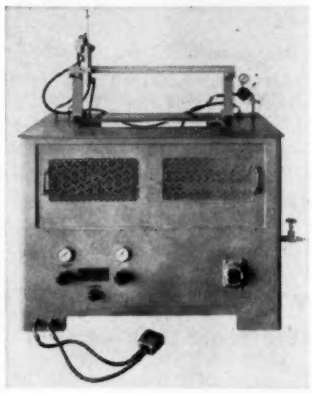


Measurement of vibration where direct physical contact is not feasible and measurement of the dilation and eccentricity of rotating parts are possible with the Type B-731-A vibration meter. It can also be used for vibration tests and to determine sizes and grades of parts for tolerance. Distances and vibration amplitudes from 50 mu in. to 0.5 in. can be measured accurately in a 1 cps to 10 kc frequency band.

A noncontacting probe, connected to a 50-kc oscillator and suitable amplifying equipment, is brought into proximity with the object under test. The capacitance so formed is interpreted in terms of distance and peak-to-peak vibration. The two quantities are displayed on direct-reading meters. Probes are available to give full-scale deflections for both distance and vibration of 0.001, 0.01, 0.1 and 0.5 in. An oscilloscope can be connected to the amplified probe signal for qualitative and quantitative analysis of vibration. Made by **Wayne Kerr Corp.**, 2920 N. Fourth St., Philadelphia 33, Pa.

▲ For more details circle NED-621 M8 on enclosed inquiry slip ▲

AUTOMATIC SPRAY PAINTER two-gun unit sprays 8 x 22-in. areas, assures even deposition



Even deposition of paint to the same thickness over the entire part is achieved by this two-gun automatic spray painting machine. Mechanical reciprocating drive provides smooth gun travel with no pauses even when the traversing guns reverse their direction. Guns paint in both directions, automatically shutting off at the end of each stroke. Machine sprays areas up to 8 in. wide and 22 in. long. Speed of gun travel is adjustable from 35 to 90 fpm.

Chain drive is powered by ¼-hp 110-v single-phase 60-cycle motor wired for explosionproof purposes. All working parts are enclosed, and mechanism is automatically lubricated. Machine is supplied with 12-in. diameter round exhaust duct collar and can be equipped with counter and timer controls, air clamping hold-downs, and tilting guns for angle painting. Made by **Conforming Matrix Corp.**, 338 Factories Bldg., Toledo 2, Ohio.

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the MEYERCORD co.
Dept. C-316 5323 West Lake St., Chicago 44, Illinois

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NOW ONLY $685.00 COMPLETE

The BIG, RUGGED... **Johnson** MODEL J WET CUTTING

Never Before . . . So Much Saw for so little invested!

Only Johnson offers *all* of the outstanding construction features and performance advantages for a *lower* initial price.

Why pay more, when you can have the best for less? Prove it to yourself. Compare the big, rugged Johnson saws with others costing hundreds more. You'll find that *only* Johnson delivers the functional design, the dependability, precision and convenience factors, you've wanted so long.

Immediately available in five high capacity models, wet or dry cutting, to meet any metal cutting requirement . . . more efficiently and economically.

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JOHNSON MODEL J (Wet or Dry) **Heavy Duty Band Saw**
- Large Capacity
- Versatility
- Variable Speeds
- Lower Cost
- Se[illegible]-Portability
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- O[illegible]rational Safety
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Midwestern Distributor **W. Q. LUNDMARK** 75 N. Broadway Des Plaines, Ill.

Western Distributor **HASTINGS DISTRIBUTORS** 1605 Solano Avenue Berkeley, Calif.

Johnson MANUFACTURING CORPORATION
Barnes & Taylor Sts., Albion, Mich.

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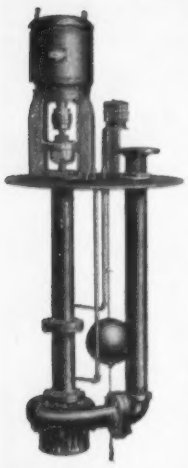
DEMING
VERTICAL SUMP PUMPS



Vertical Sump Pumps . . . single and duplex units, designed for wet or dry pit service. Efficient, dependable with the latest construction and design features.

Deming's complete line of pumps for industrial requirements includes:

- **Vertical Turbine Pumps**
- **Multi-Stage High Pressure Vertical Centrifugal Pumps**
- **"Motor-Mount" Centrifugal Pumps**
- **End-Suction Centrifugal Pumps**

For information and detailed specifications, contact your qualified Deming distributor or write:

THE DEMING COMPANY
520 Broadway • Salem, Ohio

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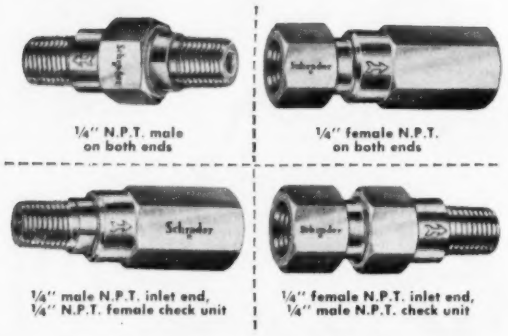
NEW AIR CHECK VALVES



¼" N.P.T. male on both ends

¼" female N.P.T. on both ends

¼" male N.P.T. inlet end, ¼" N.P.T. female check unit

¼" female N.P.T. inlet end, ¼" male N.P.T. check unit

. . . have spring loaded check to assure positive sealing action at low pressures

. . . extremely compact, relative to large flow capacity

Permit air flow in one direction and check air flow in opposite direction. Long, trouble free service assured by generous seating area between metal check and oil resistant washer. All metal parts are of brass, or heavily plated for corrosion resistance.

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Whether you're polishing the business end of a stainless steel golf club or smoothing out the rough spots in precision instrument parts, Jewel Brand Coated Abrasives ensure faster, finer finishing. On job after job, experience proves that **end products cost less when you finish with Jewel Brand Abrasives.** Prove it for yourself now. Order from your Industrial Distributor or write for specific recommendations.

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Belts • Rolls • Sheets • Discs • Specialties
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South Braintree 85, Massachusetts

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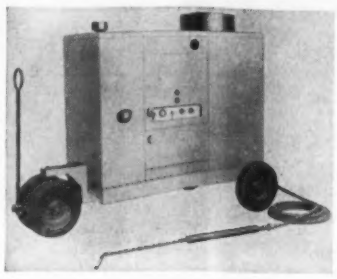
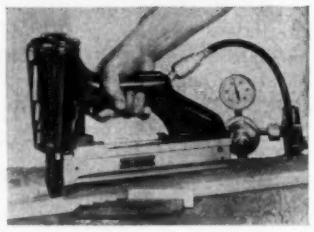
STEAM-HYDRAULIC CLEANER has 11 different cleaning actions



Proper combinations of heat, pressure, and cleaning compound are supplied by the 3500 Series Hypressure Jenny steam - hydraulic cleaner. It offers an instant choice of eleven different cleaning actions by movement of a single lever. The 360-gph capacity pump delivers only the amount required. Outlet pressures and temperatures are variable up to 300 psi and 325° F. Trailer mounted, shop portable, or stationary models with choice of oil or gas for fuel are available. Operation requires connection to a water line and to 115-230 v electrical source. Made by **Homestead Valve Mfg. Co.**, Hypressure Jenny Div., Coraopolis, Pa.

▲ For more details circle NED-628 M8 on enclosed inquiry slip ▲

AIR-POWERED BRAD GUN drives 1 and 1½-in. cohered brads



Safety yoke which prevents firing except into the material being worked on is a feature of the Duo-Fast air-powered brad gun. The woodworking tool operates on 8 to 40-psi air lines, depending on the job to be done. It drives 1 and 1¼-in. Duo-Fast cohered brads into hard materials at pressures as low as 50 lb. Made principally of magnesium, the 5-lb, front-end loaded gun holds 100 brads. The safety yoke also serves as an automatic trip for rapid-fire operation. A model for driving FHA-approved staples will be available soon. Made by **Fastener Corp.**, 3702 River Rd., Franklin Park, Ill.

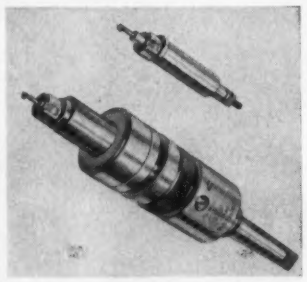
▲ For more details circle NED-629 M8 on enclosed inquiry slip ▲

TUNED FREQUENCY CONVEYOR feed rate variable from 0 to 40 fpm

Any material can be conveyed at a feed rate infinitely variable from 0 to 40 fpm by this non-jamming, stallproof tuned frequency conveyor. Sand rating, for example, is upwards of 10 tons per hour with power consumption of less than 200 w. Units have trough widths from 4 to 12 in. and single section lengths from 2 ft. They are designed for 115, 230, or 440-v, 60-cycle power sources in either type 1 or 12 enclosures. Special troughs are offered for screening, segregation, mixing, distribution to multiple points, live storage, orienting, sorting, and even inspection. Trough coatings can be applied to eliminate metal contact. Made by **Campbell Machines Co.**, 18634 Fitzpatrick, Detroit 28, Mich.

▲ For more details circle NED-630 M8 on enclosed inquiry slip ▲

AUTOMATIC RECESSING TOOL design prevents binding, chattering



Eight adapters for use with the improved Seibert automatic recessing tool accommodate ¼, 5/16, ⅜, and ½-in. cutting tool shanks. Two cam follower pins located 180 deg apart prevent binding, provide chatter - free operation, and maintain concentricity. Four adapters hold the cutting tool on center and four hold it below the part centerline. Inside shell of the holder rotates in an eccentric hole, giving the tool a radial motion when entering the part. Depth of recess is controlled by a knurled ring with 0.001-in. graduations. Any depth can be obtained up to 0.100 in. on either side. The quick-change adapter presets the cutting tool to the proper depth in the hole. The holder can be ordered with almost any type of taper or straight shank. Grooving, thread-recessing, and back-chamfering tools to fit this holder are stocked. Made by **Seibert & Sons, Inc.**, Chenoa, Ill.

▲ For more details circle NED-631 M8 on enclosed inquiry slip ▲

Rotary piston filler spurts aerosol filling 50%

Fast fill without spill. This packaging plant fills 20,000 to 40,000 aerosol cans in an 8 hr. day with its Pfaudler piston filler—an increase of 50% over previous methods. Accuracy is held to one or two grams on seven- and twelve-ounce cans.

Fast cleaning. In one half-hour one man can clean the filler thoroughly. He removes only two parts at each station.

Easy maintenance. Routine cleaning and lubrication are about the only maintenance.

Just right for heavy products. These fillers are particularly well suited to filling viscous products like tooth paste, shaving cream, etc.

Send for Bulletin 911 for information on the complete line of Pfaudler rotary piston fillers.

THE PFAUDLER CO.
a division of PFAUDLER PERMUTIT INC.
Dept. NED-128, Rochester 3, New York

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Don't scrap it . . . until we see it!

This low-cost lamp reconditioning process saves users up to $150

Burned-out quartz mercury vapor lamps can be economically restored to original operating efficiency. The Nu-Life process can get extra mileage out of practically any lamp. Necessary elements are replaced, the entire unit overhauled and the lamp job-proven in our testing laboratory. Lamps are returned to you within ten days — quality tested, liberally guaranteed and ready for immediate service with fine printing definition. Investigate this performance-proven quality service now!

Write for details or ask for a Nu-Life installation in your area for a first-hand report.

QUARTZ RADIATION QR CORPORATION

Quartz Radiation Corporation
54 Summer Ave., Newark, N. J.

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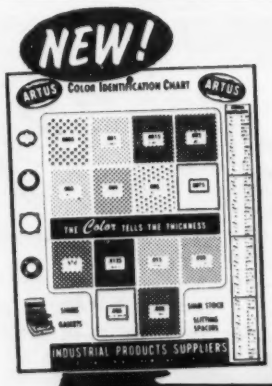

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ARTUS

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Write for this handy COLOR CHART, today!

Artus Plastic Shims are real time savers in production and maintenance. They're used by many of America's best known industrial corporations because they're more efficient, more convenient, always available.

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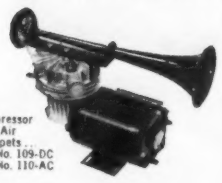
a BLASTING horn

. . . or a complete audio-visual communication system



Compressor Type Air Trumpets . . . Cat. No. 109-DC Cat. No. 110-AC

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"Live" ROLLER TOP ON Weld-Bilt LIFT TABLE

SPEEDS SHEET METAL PRODUCTION

Load this Weld-Bilt Hydraulic Lift Table with two or four stacks of sheet steel, move it up to your press or brake. Then as your operator uses one stack, he just turns the hand crank, and the next stack moves to machine position — and you load another stack into position. Platform can be raised a fraction-of-an-inch at a time so that each sheet can be slid onto the press — no manual lifting. Lift is controlled by two-way foot pedal.

This Weld-Bilt "Live" Roller Lift Table is available in varying sizes and capacities to suit your needs. Just write, outlining your specific need. We'll be glad to suggest a profitable Weld-Bilt engineered adaptation that will save you production time and labor.

"Weld-Bilt" PRODUCTS

Weld-Bilt Vertical Floor to Floor Transportation Systems — Lift Trucks — Portable Elevators — Automatic Elevators.

WEST BEND EQUIPMENT CORP.
MATERIALS HANDLING ENGINEERS
311 WATER STREET, WEST BEND, WISCONSIN

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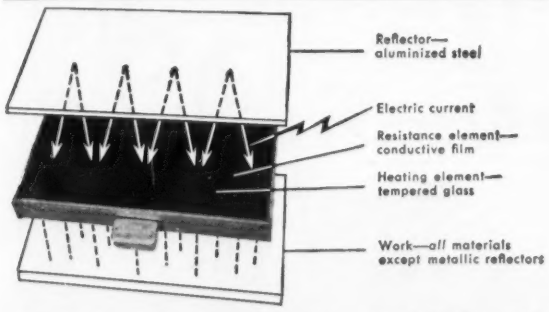

Cut drying TIME and COSTS with PYREX® Radiant Heaters

- area source provides uniform heat
- long waves absorbed faster than those from lamps or sheathed units
- accurate temperature control
- mount vertically, horizontally, banked, staggered, or diagonally
- squares, or rectangles —4 sizes

Core of this heater is a tempered *glass* panel coated with an electrical conducting film. Heater comes to you COMPLETE—panel mounted in aluminized steel frame, built-in aluminized steel reflector, mounting hangers, junction box and leads. Here's the answer to putting the *heat* on and getting the most for your money, time and space.

All the facts about PYREX brand industrial radiant heaters summed up in PE-60. Write for your free copy, and the name of distributor in your area.

CORNING GLASS WORKS
56-12 Crystal Street, Corning, N.Y.
Corning means research in Glass

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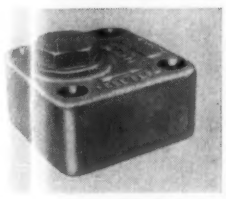
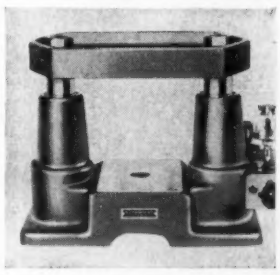
HYDRAULIC CHECK VALVES
for use in systems to 5000 psi



Both subplate mounted and sandwich types of check valves are available for operation in hydraulic systems up to 5000 psi. Their principal function is to block oil flow in one direction, yet allow free flow in the reverse direction. Both types are made in 3/4 and 1 1/4 in. sizes. Subplate type meets JIC standards and is offered with or without the matching subplate. Smaller subplate valve has either 3/4-in. pipe tap or UNF connection. Sandwich type unit can be added to a hydraulic circuit without adding or breaking pipe connections. It is designed to fit between any Denison subplate mounted sequence valve in 3/4 and 1 1/4-in. sizes and the subplate itself. Capacity of 3/4-in. valve is 20 gpm and for the 1 1/4-in. valve, 65 gpm. Made by **American Brake Shoe Co.**, Denison Engineering Div., 1160 Dublin Rd., Columbus 16, Ohio.

▲ For more details circle NED-638 M8 on enclosed inquiry slip ▲

AIR JIGS
in up and down clamping types



Line of air-operated jigs comprises four types, two of which clamp downward by lowering the top plate, and two which clamp the part upward to the stationary top plate. Jigs are compact, operate noiselessly, and afford controlled plunger speed. They operate on 80-psi pressure and feature a floating action. Seals on the plunger keep dirt and chips out of the moving parts. Type OA clamp-down jig shown has both a standard and high rise to accommodate a variety of parts. Made by **Cleveland Universal Jig Co.**, 13404 St. Clair Ave., Cleveland 10, Ohio.

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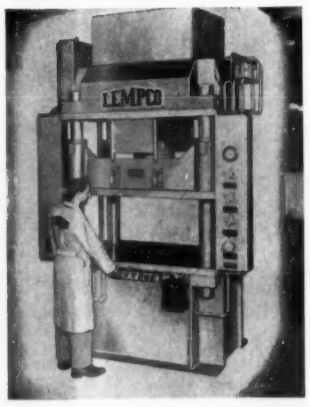
PLATEN PRESSES
for forming, molding, other uses



Tonnages from 25 to 600 and sizes from 18 x 12 in. to 72 x 60 in. are available in Series 700 platen presses. They are suited for metal forming and drawing, plastics molding, die try-out work, and general industrial use. All are four-column hydraulic units with accurate control, capable of high production. Available options include adjustable limit switches, fast-acting speed and pressure controls, timers, semiautomatic pushbutton control, multiple tonnage control, and micro-inch jogging. Made by **Lempco Industrial, Inc.**, Machine & Tool Div., Dunham Road, Bedford, Ohio.

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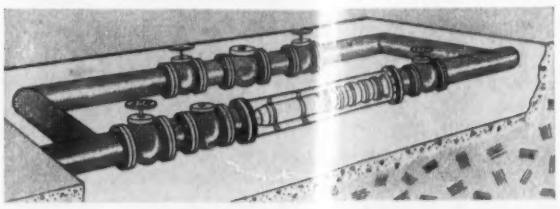
PIPE LINE PUMP
submersible, operates horizontally

Design of the Power-Line submersible pipe line booster pump enables it to be suspended within a special flanged section of the pipe line in a horizontal posi-



tion. Motor of the pump is centered and firmly held by spiders within the pipe section. The submersible power cable leads to a terminal box mounted on the outside of the special section. Pump is available in sizes for operating within 8 to 24-in. pipe. Capacities range from 100 to 4000 gpm with heads from 50 to 500 ft. Made by **Layne & Bowler Pump Co.**, Vail & Sycamore, Los Angeles 22, Calif.

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Just a single stroke! . . .
CUTS ROUND RODS 1/8" to 7/8" on a
MARVEL ROD CUTTER

Available in three models:

No. 5	1/8	3/16	1/4	5/16	3/8
No. 6	3/8	7/16	1/2	9/16	5/8
No. 7	3/8	1/2	5/8	3/4	7/8

These are bench models, but the No. 7 MARVEL Rod Cutter can be furnished mounted on legs. See your Industrial Distributor or write us for literature and prices.

ARMSTRONG-BLUM MFG. CO.
5700 W. Bloomingdale Ave. • Chicago 39, U.S.A.
Manufacturers of the outstanding MARVEL Metal Saws.

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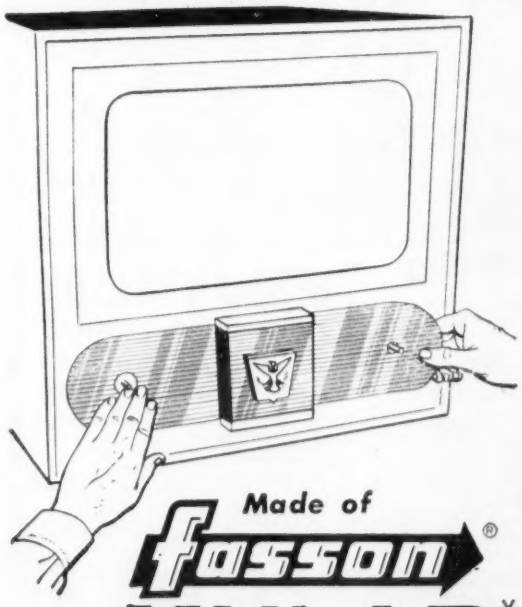
Self-Adhesive
Metallic Trim



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Distinctive Beauty
- **Many Colors and Patterns** . . . shimmering metallic finishes . . . smooth or embossed . . . in stock.
- **Tough** . . . tarnish-proof . . . resists abrasion . . . isn't damaged by moisture, temperature or most chemicals.
- **Easily Printed** . . . with your product's name, trademark, other designs.
- **Unlimited Uses** . . . for trim, nameplates, emblems, kick-pads, etc.

Reduces Costs
- **Cuts Parts Costs** . . . no expensive forming dies . . . no anodizing . . . fits contours easily.
- **Speeds Assembly** . . . peel off backing paper . . . press in place . . . no screws, fasteners, glue or special skills needed.
- **Adheres Permanently** . . . to any clean, smooth surface. Our S-201 high tack adhesive holds tighter with time.

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Representatives in principal cities. Write for the name of the one nearest you.

* "Mylar" is DuPont's registered trademark for its brand of polyester film.

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New Efficiency

The sensational new FLEX-A-PRENE Paint Mask keeps out paint pigments and solvents with amazing efficiency, yet it's light (just 1 ounce), comfortable and so easy to talk and breathe through you hardly know you're wearing it.

New Economy

FLEX-A-PRENE's low first cost is only part of the story. Most important savings come from its endurance in service and time saved through less frequent filter replacements. You can expect at least 100 hours of exposure before filter replacement is necessary.

Sample: $1.50 postpaid
(INDUSTRIAL PRICE ONLY)

FLEXO PRODUCTS, INC. Westlake, Ohio

For more details circle NED-644 M8 on enclosed inquiry slip

SAFE PORTABLE HEAT
FOR YOUR PLANT

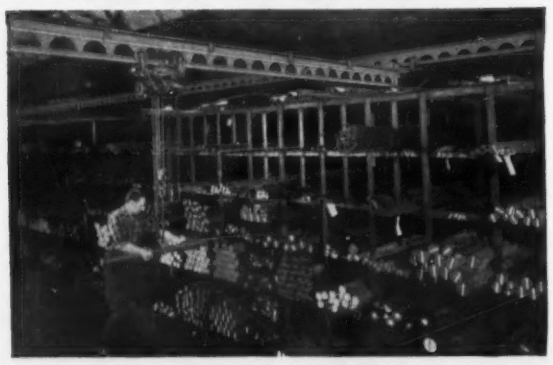
DE LUXE MODEL
HERMAN NELSON
PORTABLE AIR HEATERS

SAVE MONEY . . . SAVE MAN HOURS

- Cure and dry concrete, plaster, other materials
- Heat loading docks, storage sheds, production areas
- Pre-heat engines, thaw frozen equipment
- Protect plant equipment during heat shut-downs
- Temporary heat for warehouses

Write for free literature
AMERICAN AIR FILTER COMPANY, INC.
PORTABLE PRODUCTS DEPT. 15 • LOUISVILLE 8, KY.

For more details circle NED-645 M8 on enclosed inquiry slip



20 FOOT BARS
Stored and Handled Efficiently

Simple, inexpensive overhead tramrail cranes make it easy to handle long, unwieldy bars and store them in racks where readily found. One man can easily and quickly place a heavy bar into or take out of storage and deliver to any point covered by the crane.

Wherever materials are moved Cleveland Tramrail offers possibilities of tremendous savings.

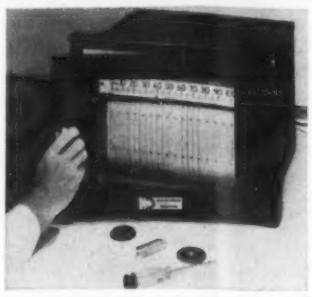
GET THIS BOOK!
BOOK NO 2008
Packed with valuable information
CLEVELAND TRAMRAIL ENGINEERING AND APPLICATION DATA BOOK 2008

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6621 East 285th Street, Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle NED-646 M8 on enclosed inquiry slip

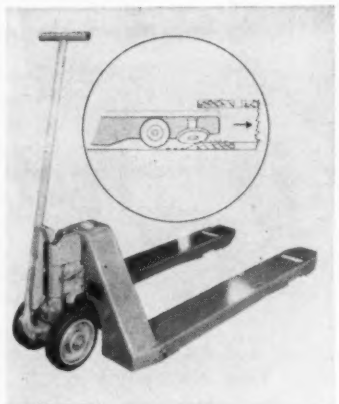
RECORDING POTENTIOMETER
measures 2 to 24 variables



Simple plug-in adapter units contained in a kit of change - over parts enable the Model 6702 multipoint recording potentiometer to measure from 2 to 24 variables. It will measure voltage, frequency, temperature, pressure, pH, or any other input from thermocouples or transducers. Instrument is also easily changed into a pen-dragging type for single-point recording. It mounts on standard 19-in. relay rack and is available for panel or wall mounting. Made by **Daystrom Inc.**, Weston Instruments Div., Newark 12, N. J.

For more details circle NED-647 M8 on enclosed inquiry slip

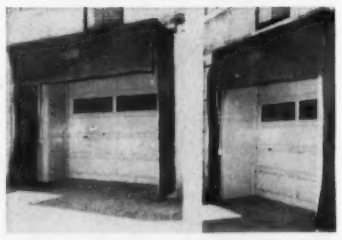
PALLET LIFT TRUCKS
inclinable disc aids fork entry



Entry of pallet lift truck forks into the pallet is made easier with the "flying saucer," an angled disc which inclines to ease the fork over the bottom pallet board. The disc replaces the conventional roller wheels on the end of the truck forks. The inclined plane principle gives the effect of adding 3 in. of roller diameter. Disc feature is standard on Model HX 2000, 2500, and 3000-lb capacity trucks and on Model NX 4000-lb capacity units. It is also available on the improved Palletox Model PXG battery-powered low-lift pallet truck in 4000 and 6000-lb capacities. Made by **Barrett-Cravens Co.**, 628 Dundee Rd., Northbrook, Ill.

For more details circle NED-648 M8 on enclosed inquiry slip

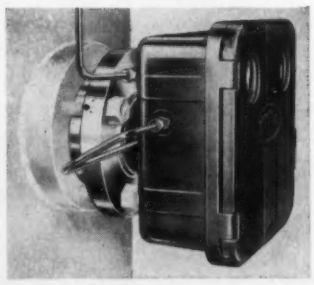
DOCK SHELTER
in widths to 11 ft, heights to 13 ft



Fast one-man operation, spring - tensioned upper frame, adjustable front head curtain, and UL-approved fabric are among the features of this Econo-Dox truck and rail dock shelter. Standard fabricated sizes include maximum width up to 11 ft and maximum height to 13 ft. Standard projection is 2 ft 9 in. Cover is green 12.29-oz duck. Frame is assembled at the plant. Shelter is priced as low as $185. One with a 4 ft 6 in. projection can be obtained for $225. Made by **Frommelt Industries**, Box 419, Dubuque, Iowa.

For more details circle NED-649 M8 on enclosed inquiry slip

LEVEL CONTROLLER
for corrosive or heavy liquids



Hard - to - handle corrosive and heavy liquids served by the Type 115 floatless level controller come into contact only with the diaphragm and diaphragm ring. Design eliminates the danger of corrosion or clogging. The instrument transmits a pneumatic output signal which is equal in magnitude to the head pressure resulting from the liquid in the vessel. Major uses are on vented or open tank service for liquid level indication, recording, and control. When used for recording and control, a controller is required to convert the transmitted output into a standard pneumatic signal for the recorder and control valve. Made by **Fisher Governor Co.**, Marshalltown, Iowa.

For more details circle NED-650 M8 on enclosed inquiry slip

the material of 1000 uses

Where strength without excess weight is desired, for free passage of light and air, for utility and beauty in countless applications, Penmetal expanded metal offers versatility, distinction, and economy. Ideal for screens, guards, grilles, shelves, baskets, gratings, displays, etc.

Send for free reference guide 513-EM. Includes sizes, weights, dimensions and typical applications for expanded carbon steel.

PENN METAL COMPANY, INC.
General Sales Office: 40 Central St., Boston 9, Mass.
Plant: Parkersburg, W. Va. PM-157

For more details circle NED-651 M8 on enclosed inquiry slip

with a
DI-ACRO ROD PARTER

Make several thousand burr-free cuts per hour in bar stock

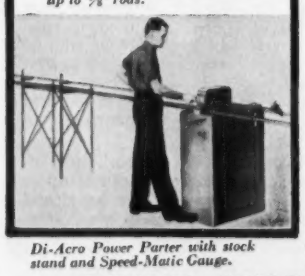
Combination shearing-breaking action parts bar stock without burring and minimum distortion. Handles up to 5/8" round bar stock—square, rectangular, and hex shaped bar stock can be parted when machine is equipped with special die heads.

Material range is from hot rolled bar stock to stainless steel and other high alloy materials. The harder the material is the better it parts.

Long lasting die heads can be reversed before resharpening—can be sharpened many times. Standard cutting heads in No. 2 and power models have 10 graduated holes from 1/16" to 5/8"; No. 1 Model has eleven holes. Optional die heads for parting scaly hot rolled bar stock *at no extra charge.*

Speed-Matic Gauge, an accessory on power model, enables machine to part off several thousand short pieces an hour. *Send us samples for test cutting or consult the Yellow Pages of your phone book under Machinery—Machine Tools for the nearest Di-Acro distributor.*

Hand operated model also handles up to 5/8" rods.



Di-Acro Power Parter with stock stand and Speed-Matic Gauge.

This 1/2" stainless steel bar stock has been "parted" in a Di-Acro Rod Parter. Shiny edges show where rod was sheared, then fractured or "parted off." Will clear hole its own diameter.

di-acro PRECISION METALWORKING MACHINES
pronounced die-ack-ro

O'NEIL-IRWIN MFG. CO.
354 8th Avenue—Lake City, Minn.

For more details circle NED-652 M8 on enclosed inquiry slip

PROTECT crushers, screens, grinders, all processing machinery from tramp iron damage.

REMOVE contaminating iron particles from materials and products.

PREVENT fires and explosions caused by sparks from tramp iron.

with DINGS PERMA-PULLEYS

Dings *permanent* Alnico Magnetic Pulleys are designed with high surface strength to provide tremendous holding power for large, machine-wrecking pieces of tramp iron. They also assure powerful attraction for pulling fine particles of contaminating iron out of materials on conveyor belts. Separation at full production volume is *positive* and *automatic*.

Dings

Get full details from Bulletin C-1007A.

DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave., Milwaukee 46, Wis.

▲ For more details circle **NED-653 M8** on enclosed inquiry slip ▲

INDICATING FLOWMETERS for high pressure applications

Vane in the flow chamber and the indicating scale pointer are coupled magnetically in the Series L line of indicating flowmeters, developed for a pressure range from 60 to 2000 psi. Instrument bodies can be standard ferrous or nonferrous materials, with the vanes usually phosphor bronze or nickel silver. Where required, special alloys can be supplied for body or vane. Meters for scale ranges up to 10 cfm and 20 gpm are available for direct installation into the piping. Shunt type flowmeter assemblies are used for larger flows. When there is a change in the characteristics of the fluid being measured, interchangeable inserts and scales can be provided to permit field changes. Made by **Eclipse Fuel Engineering Co.**, Seico Instruments Div., 1002 Buchanan St., Rockford, Ill.

▲ For more details circle **NED-656 M8** on enclosed inquiry slip ▲

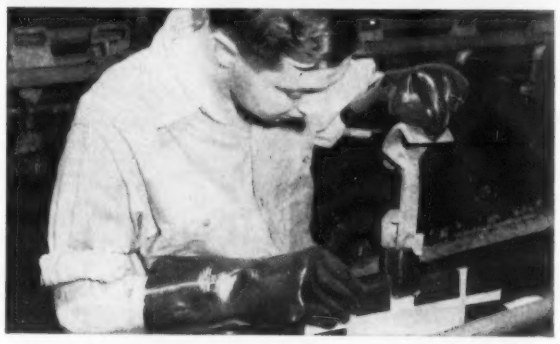
ULTRASONIC GENERATOR activates 6 sq ft of transducer area or 300 gal of cleaning solution

High volume, conveyorized, and other large, production type ultrasonic cleaning installations can be powered with the Model APT-500 3-kw Sonogen ultrasonic generator. It will activate up to 6 sq ft of transducer area, or 300 gal of cleaning solution. Unit features motor tuning, twin oscillator construction, and remote control. Motor tuning provides easy, reliable frequency adjustment between 36-40 kc. Step-down isolation transformer keeps all control circuitry at a safe 110 v.

Voltage stabilizing transformer in the filament circuit, plate voltage 25 per cent below recommended ratings, simple circuitry, and four heavy-duty air-cooled power triodes are other features contributing to trouble-free operation. Unit is also an economical substitute for manual cleaning at the immersion stage of large-scale washing, degreasing, or plating installations. With twin oscillators, generator can activate two cleaning tanks independently.

Constructed of aluminum to reduce eddy current losses, unit weighs 350 lb and measures 30 x 24 x 70 in. Made by **Branson Ultrasonic Corp.**, 40 Brown House Rd., Stamford, Conn.

▲ For more details circle **NED-657 M8** on enclosed inquiry slip ▲



Neoprene Extracoat gives 20% longer life

► **By applying additional neoprene** to the palm area, where wear is greatest, Edmont now adds at least 20% to the service of this Neox glove, while retaining flexibility. The coating itself is specially reinforced—far tougher than ordinary neoprene. Gives best all-purpose protection against oil, acids, solvents, heat and snagging. Comfortable wing thumb, curved, pre-flexed finger pattern.

► **Free Test Offer to Listed Firms:** We make more than 50 types of coated gloves, including 8 Neox styles. Describe your operation. We will send samples of the correct glove for on-the-job testing. Edmont Manufacturing Company, 1240 Walnut Street, Coshocton, Ohio. In Canada write MSA, Toronto.

Edmont JOB-FITTED GLOVES

▲ For more details circle **NED-658 M8** on enclosed inquiry slip ▲

You can do better...with

B-RIGHT-ON®

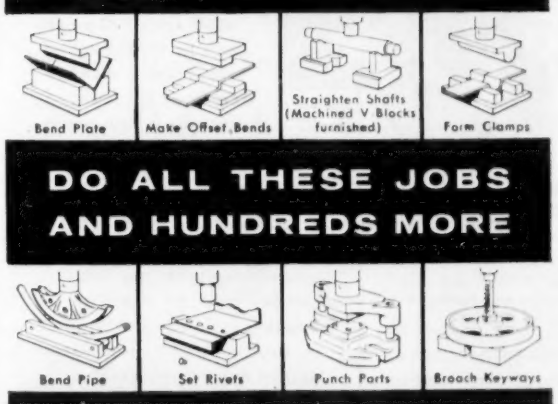
SOCKET SCREW PRODUCTS

- Rigid QUALITY CONTROL from initial steel selection to final packaging
- IMMEDIATE SERVICE from selected mill supply houses' stocks
- Design and Dimensional Brochure on request

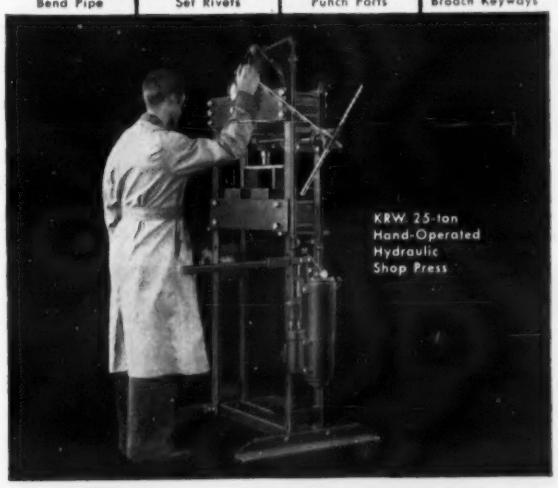
THE BRIGHTON SCREW & MFG. CO.
1957 Reading Road
Cincinnati 2, Ohio

▲ For more details circle **NED-654 M8** on enclosed inquiry slip ▲

KRW SHOP PRESSES



DO ALL THESE JOBS AND HUNDREDS MORE



A "DO-EVERYTHING" MACHINE: This KRW 25-ton Hand-Operated Hydraulic Press will do a multitude of jobs that need a "squeeze" . . . *quickly, accurately and profitably*. In many cases, dies can be readily improvised from scrap steel. Changing from one setup to another usually takes only a minute or two.

EASY TO OPERATE. The capstan hand wheel brings the ram rapidly down to the work. With the pump handle positioned at a convenient working height, it's easy to keep an eye on the pressure gage as well as the work.

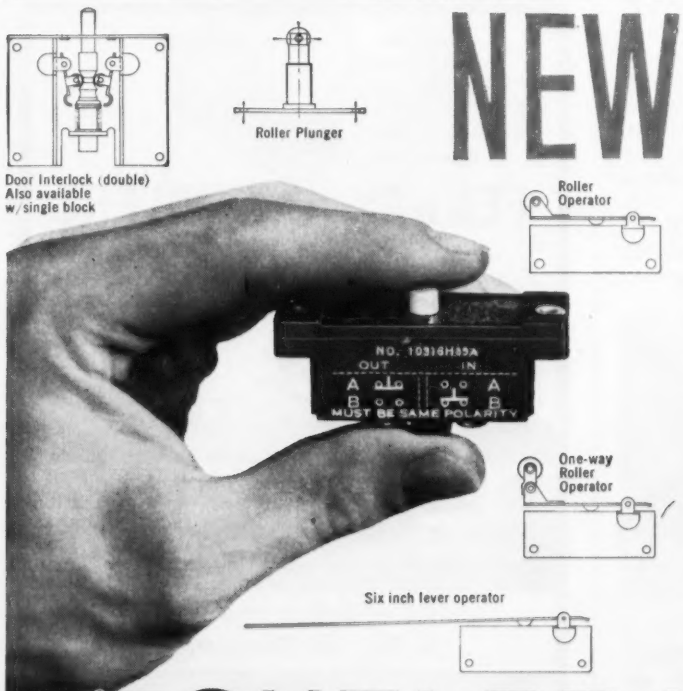
PRESS WITHIN A PRESS. By using the capstan hand wheel to apply ram pressure, you also can operate this 25-ton hydraulic press as a 3-ton mechanical press. *It's a KRW exclusive!*

MAIL THIS COUPON for complete details on KRW Hand-Operated and Motor-Driven Shop Presses (Capacities: 25 thru 150 tons).

K. R. WILSON, INC.
1228 MAIN ST., ARCADE, N. Y.
SEND your Hand-Operated and Motor-Driven Shop Press Bulletins to us, without obligation

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ ZONE _____ STATE _____

▲ For more details circle **NED-659 M8** on enclosed inquiry slip ▲



NEW Industrial Duty Precision Switch

COMPACT . . . *Contact blocks measure 2½" x ¾" x 1"*

FLEXIBLE . . . *Choose from 39 ready-to-install units or combine contact blocks and operators to "custom-design" special purpose units*

DEPENDABLE . . . *New heavy duty design and construction assures ten times greater electrical and mechanical life*

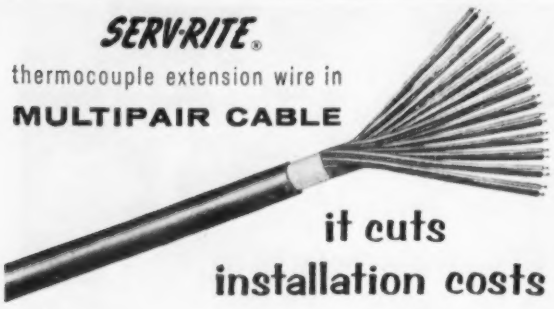
Cutler-Hammer 10316 Precision Switches are built better to last far longer. Be sure you have the new descriptive bulletin detailing important design features, dimensions, and ratings. Write today for Bulletin EN 154-Y-2[illegible]-U200. Cutler-Hammer Inc., Milwaukee 1, Wis.

CUTLER-HAMMER

Cutler-Hammer Inc., Milwaukee, Wis. *Division:* **Airborne Instruments Laboratory.** *Foreign:* **Cutler-Hammer International, C. A.**
Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.; Intercontinental Electronics Corporation, Inc.

▲ For more details circle **NED-655 M8** on enclosed inquiry slip ▲

SERV-RITE®
thermocouple extension wire in
MULTIPAIR CABLE



it cuts installation costs

When four or more pairs of thermocouple extension wires are needed, SERV-RITE thermocouple extension cable will reduce installation costs several ways. It takes considerably less time compared to pulling individual pairs of wires through conduit. Also, much smaller conduit can be used than for the same number of individual wires. It can be hung without conduit, or installed in open trough or by direct burial.

The cable, as well as each conductor, is color coded. Also, each pair of wires is clearly marked for quick identification.

Cables with multiple pairs of four or more conductors of the commonly used types are carried in stock.

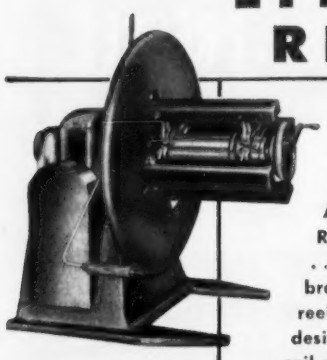
8278

Write for Bulletin No. 1200-3 for specifications and data on SERV-RITE thermocouple extension cables.

CLAUD S. GORDON CO.
Manufacturers • Engineers • Distributors
621 West 30th Street, Chicago 16, Illinois
2013 Hamilton Ave., Cleveland 14, Ohio

For more details circle NED-660 M8 on enclosed inquiry slip

100 TO 40,000 POUND COIL CAPACITY
LITTELL REELS



No. 25-18—Littell Motor Driven Automatic Centering Reel With Arm Control. Coil Capacity, 2,500 lbs.

Ask for a Littell Coil Weight Calculator

Whether you feed stock from 100 pound coils or 40,000 pound coils, there is a Littell Automatic Centering Reel to meet your needs . . . motor driven, electric brake and plain brake reels. Every Littell Reel is designed for swift, safe coil replacement and smooth, *controlled* uncoiling. All models combine smooth running accuracy with rugged construction that assures *extra* years of dependable service.

Write for Littell Catalog Section "D"

F. J. LITTELL MACHINE CO.
Speed with Safety
ROLL FEEDS • COIL CRADLES
STRAIGHTENING MACHINES
REELS • AIR BLAST VALVES
District Offices: Detroit, Cleveland
4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

For more details circle NED-661 M8 on enclosed inquiry slip

get the facts about forgings...

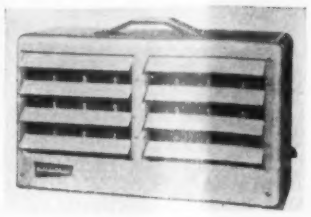
from the world's largest producer of brass, bronze and aluminum forgings . . .

MUELLER BRASS CO.
PORT HURON 37, MICHIGAN
195

Please send me a copy of your ENGINEERING MANUAL H-58565
NAME _____
COMPANY _____
ADDRESS _____

For more details circle NED-662 M8 on enclosed inquiry slip

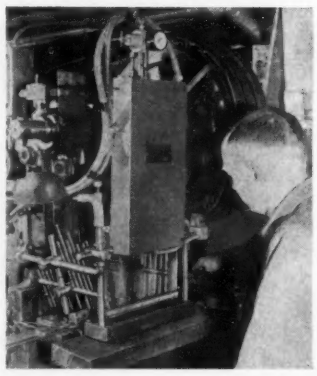
ELECTRIC HEATER
in 17,075 and 34,150 Btu ratings



This C and I model commercial and industrial electric heater combines the heat output of an industrial heater with the styling of a modern domestic unit. The quiet-operating, gray and ivory enamel finished heater is made in 5 and 10-kw ratings with respective outputs of 17,075 and 34,150 Btu. Fan driven heat is directed by adjustable deflectors. A fan delay switch prevents heater from blowing cool air during initial operation. The 5-kw model is portable, or can be suspended on swivel brackets. The 10-kw model is basically two 5-kw units fixed side by side, each retaining its thermostatic control. Setting one thermostat higher than the other places only half the unit into operation. Safety grid heating element and safety switch are featured. Made by **Commercial Controls Corp.**, Electromode Div., 570 Culver Rd., Rochester 3, N. Y.

For more details circle NED-663 M8 on enclosed inquiry slip

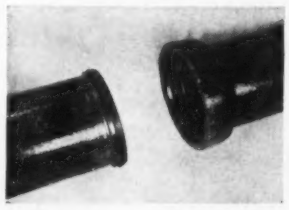
PRESS GUARD
for hand, blanking, automatic work



This universal gate and enclosure guard installed on a press protects the operator from accidents and speeds up production on blanking, secondary or hand feed, and automatic operation work. The guard swings aside for die changes, and an electric interlock prevents the press from being tripped with the gate open. The guard forms a barrier around the die with full vision at front and sides. Upward travel of the gate may be adjusted by shortening the stroke of the air cylinder, actuated by a four-way solenoid valve. Unit can be attached to many types and sizes of presses. Made by **Searjeant Metal Products, Inc.**, 54 Pittsford Rd., Mendon, N. Y.

For more details circle NED-664 M8 on enclosed inquiry slip

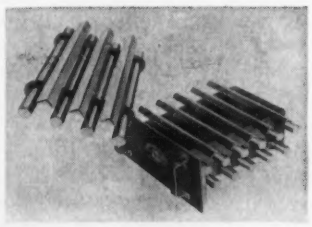
CLAY PIPE JOINT
gasket type effects a permanent seal



Permanent tight coupling of clay pipe sewage and waste drainage lines can be made with the Tex-Vit rubber gasket-type polyester joint. Wet weather installations show that joint can be laid even with water in the trench. Lubricant is first applied to rubber gasket on the spigot end of the pipe. This end is then positioned into the bell or socket of the other pipe and given a slight push. Wedge-shaped, compression-type gasket on the spigot slides over the ribbed section of the bell casting and into a cylindrical recess. Polyester casting in the bell strengthens it against breakage. Joint resists roots and infiltration as well as sewer acids, gasoline, oils, and chemicals. Made by **Texas Vitrified Pipe Co.**, Box 117, Mineral Wells, Tex.

For more details circle NED-665 M8 on enclosed inquiry slip

PERMANENT GRID MAGNET
removes ferrites in free-flow goods



Ferrous contamination is removed from grain, chemicals, food, seeds, drugs, and similar free-flowing materials by the Magni-Power permanent grid magnet. It is offered in both single bank or drawer types and is easily adapted to chutes or hoppers of any shape. Structure is of stainless steel. Cleaning is facilitated by pull-out tubes. Special web ends and deflectors are available. (*Editor's note: This item appeared in the August, 1958 issue of NED with the photo inadvertently upside down.*) Made by **Magni-Power Co.**, Wooster, Ohio.

For more details circle NED-666 M8 on enclosed inquiry slip

DEPENDABLE MACHINE SUPPORT ... PRECISION LEVELING

get both with...
EMPCO *leveling jacks*

Solid, easily adjustable foundation for machine tools, large surface plates, automation lines, tool room and production equipment of all types. Easily installed, they increase machine efficiency, reduce downtime and maintenance. Combined with Vi-Sorb Mounting pads, Empco Jacks reduce objectionable vibration to a minimum, retard creepage, often eliminate the need for anchor bolts. Built to take it, Vi-Sorb pads stand up under repeated impact . . . resist oils, greases, acids. Jacks available in 6 styles, 25 models. Pads to fit.

INQUIRE TODAY!
ASK FOR BULLETIN NO. 100

THE ENTERPRISE MACHINE PARTS CORP.
2727 JEROME AVE. • DETROIT 12, MICH.
Manufacturers of Automatic Production Machines, Fixtures, Machine Parts

EMPCO LEVELING JACKS

For more details circle NED-667 M8 on enclosed inquiry slip

A CONVERTIBLE PIPE CUTTER

REED

● Quick, easy change-over transforms Roller Cutter into a 4-wheel cutter for ditch and other close-area work. These new Reed cutters—whether in Roller, 3-wheel or 4-wheel models — are the world's easiest, cleanest cutting tools in their size ranges. Roller model has cutting wheel in block where it remains for full sight lining up with cut-off mark. Operating with easy, ratchet-like action through one-fourth of a revolution, Reed 4-wheel model is best for close quarters work. In three capacities for pipe sizes from ⅛" to 3". Razor Blade wheels by Reed leave minimum burr, cut easier.

ASK YOUR SUPPLIER OR WRITE FOR FREE LITERATURE.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA, U. S. A.

For more details circle NED-668 M8 on enclosed inquiry slip

Easily Cuts
10-Gauge Stainless
8-Gauge Mild Steel
3/16" Aluminum and
All Non-Ferrous Metals
Without Distortion

FENWAY NIBBLERS
Will Not Bend or Curl Metal
Lightweight Fully Portable

Models Available to Do Every Cutting Job

Cuts Any Shape, Including Corrugated Metal Without Distortion
PAT. #2278174 #7278311 #2535631

Get a Free
On The Job Demonstration

3107 N. Broad St.
Philadelphia 32, Pa.
FENWAY
Machine Company, Inc.

For more details circle NED-669 M8 on enclosed inquiry slip

dependable

ANCHOR CONVEYOR TURNS

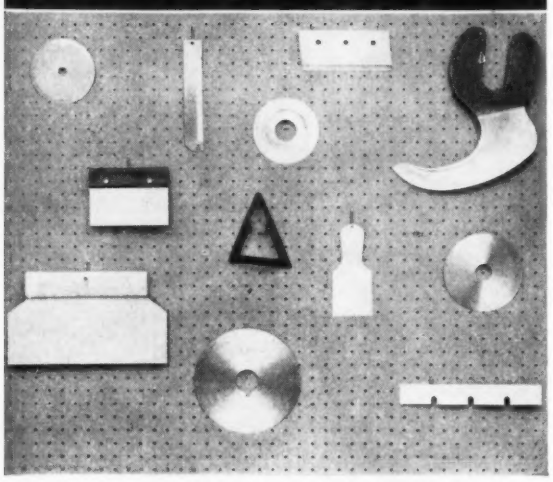
ANCHOR Traction Wheel Turns are designed with a square frame for strong installation, and mounting holes in line with rail for easy alignment. Traction Wheel Turns can be furnished with bronze or graphalloy bushings; tapered roller or "Lubricated-for-Life" bearings. ANCHOR also supplies Roller Turns and other conveyor components, or completely installed conveyor systems.

ANCHOR STEEL & CONVEYOR CO.

6906 KINGSLEY AVE. DEARBORN, MICHIGAN

For more details circle NED-670 M8 on enclosed inquiry slip

HYDE *Sharp* FOOD KNIVES



ALL TYPES FOR DOUGH — MEAT
VEGETABLES — FRUIT —
FOOD PACKAGING

WRITE FOR FREE
50 PAGE BOOKLET

HYDE MANUFACTURING CO.
SOUTHBRIDGE, MASS., U.S.A.

HYDE PRODUCTS FOR INDUSTRY

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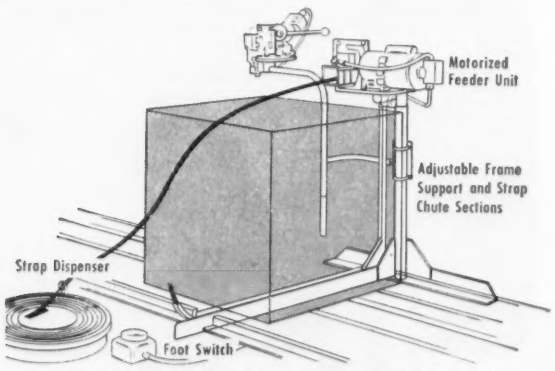


New Signode power strap feeder puts strapping around big packages fast!

With this new power strap feeder, one man quickly straps big packages without a helper and without walking around the package. The PSF-1 applies 200 or more straps per hour, cuts strapping labor costs in half.

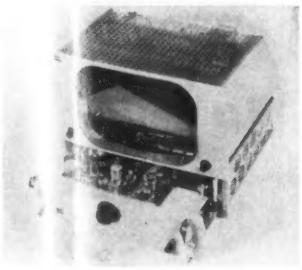
Here's the machine to use on big packages or bundles along with any Signode seal feed tool—hand, pneumatic, or electric—mounted in a tool balancer. Cost is modest; rental at nominal charge available.

New free literature sent promptly. For a demonstration, call the Signode man near you, or write:

SIGNODE STEEL STRAPPING CO.
2643 N. Western Avenue, Chicago 47, Illinois
Offices Coast to Coast
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

For more details circle NED-672 M8 on enclosed inquiry slip

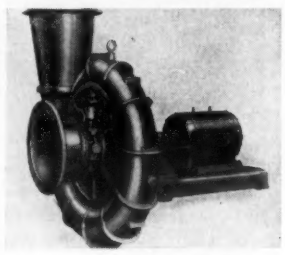
CLOSED CIRCUIT TV SYSTEM has automatic light adjustment



With its built-in automatic light control, the Model 1986 closed circuit TV system will adjust instantly to variations in light level of up to 1000:1. The Model 1986C camera, used with a 1986ACU camera control unit, provides up to 1-v output at 10 ft-c, with full 600-line resolution and zero degradation. Model DRM-14R monitor has a 14-in. aluminized picture tube, with exceptional brightness assured by the use of a Polaroid filter and a second anode voltage of 16,000 v. Bandwidth of the video amplifiers is 8 megacycles, ±0.5 db. Made by **Cohu Electronics, Inc.**, Kin Tel Div., 5725 Kearny Villa Rd., San Diego 12, Calif.

For more details circle NED-673 M8 on enclosed inquiry slip

CENTRIFUGAL COMPRESSORS sizes range from 1200 to 80,000 cfm



Line of single-stage centrifugal compressors for refinery and petrochemical applications includes Type OM unit for air service at low discharge pressures and Type OPB units for gas and air applications at higher discharge pressures. Sizes cover a 1200 to 80,000 cfm range with input horsepowers from 10 to 2500 hp. Essentially constant-pressure variable-volume machines, compressors can be used for blower service where inlet conditions are atmospheric; for exhauster service where inlet conditions are below atmospheric pressure; or for booster service where inlet conditions are above atmospheric pressure. Features include overhung rotors, single shaft seal design, and open or closed type impellers. Made by **Clark Bros. Co.**, Olean, N. Y.

For more details circle NED-674 M8 on enclosed inquiry slip

AIR GAGE checks ID, OD, center distances

Accurate measurement to a millionth of an inch is possible with the easy-to-use Model AG air gage. It can be used to check inside or outside diameters or dimensions and center distances of holes, regardless of hole size, and to check roundness and blind holes on small parts. Dial of the high linearity, zero hysteresis meter has large graduations for easy reading. An electric recording unit may be added which will permanently register readings on sensitized paper. Once the zero setting is made by master or proper size blocks, a three-point contact enables the user to detect a three, five, or seven-lobe condition in centerless grinding. Made by **B. C. Ames Co.**, 99 Lexington Ave., Waltham, Mass.

For more details circle NED-675 M8 on enclosed inquiry slip

IRON POWDER BEARINGS for light machinery uses

Comprised chiefly of iron powders, Oilite 212 powder metal sleeve bearings afford considerable cost savings in applications where corrosion is not a problem and mechanical strength requirements are within tolerable limits. Used in appliances, flip motors, power tools, light machinery, instruments, and light vehicles, bearings are especially suitable for oscillating and reciprocating motions. Units have about 20 per cent by volume oil content for lifetime self lubrication, ultimate tensile strength of 10,000 psi and compressive yield point of 9500 psi. Bearings will stand high temperatures and can be used at fairly high speeds. Made by **Chrysler Corp.**, Amplex Div., Box 2718, Detroit 31, Mich.

For more details circle NED-676 M8 on enclosed inquiry slip

Compare BAY STATE GRITCLOTH

with the abrasive sheet material you now use

RESISTS CLOGGING — Its open mesh lets debris fall through.
SPEEDS WORK — Used on electric sanders or for hand-rubbing, Gritcloth's long life cuts down-time. Its smooth cutting action ensures optimum finish with minimum effort.
ECONOMICAL — You use both sides of Gritcloth so you get more than twice the life out of every sheet. In many applications, Gritcloth lasts as much as *fifteen times* as long as ordinary coated abrasives.
AVAILABLE IN SHEETS, DISCS AND ROLLS of all standard shapes and sizes . . . non-standard sizes available on special order. Available in a wide variety of grit sizes in Aluminum Oxide or Silicon Carbide.

FREE! — *Samples on request*

BAY STATE ABRASIVES

Bay State Abrasive Products Co., Westboro, Mass.
In Canada: Bay State Abrasive Products Co. (Canada) Ltd., Brantford, Ontario. *Branch Offices:* Bristol, Conn., Chicago, Cleveland, Detroit, Pittsburgh. *Distributors:* All principal cities.

For more details circle NED-677 M8 on enclosed inquiry slip

the Answer

. . . to your small parts Handling-Storage-Transport

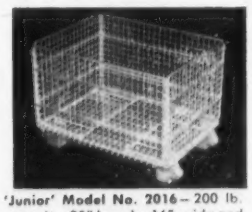
the NEW PALLETAINER 'Junior'

- **Close-mesh, all-steel containers with fold-down features**
- **Ideal for *all* small parts handling—storage—transport**

• The new lightweight Palletainer 'Junior' models are sturdy, close-meshed, all-steel containers designed for efficient handling, storage, protection and safe transit of any small parts—assembled or finished products. Ruggedly built of reinforced welded steel wire mesh, the 'Juniors' incorporate many of the outstanding construction and convenience features found only on large, heavy-duty containers.

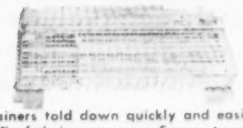
Check your plant today—see how many places the 'Junior' models could smooth production, speed processing, deliveries and save valuable handling time.

'Junior' Model No. 3220—500 lb. capacity. All welded steel wire mesh, reinforced. 32" long by 20" wide and 16" high. Mesh openings are 1⅛" square. Equipped with 4 fabricated steel stacking legs welded to deck bottom. Finished in fire-baked Aluminum paint. Weight 38 lbs.



'Junior' Model No. 2016—200 lb. capacity. 20" long by 16" wide and 12" high. All welded steel wire mesh. 1⅛" square mesh openings. Four fabricated steel stacking legs. Lossproof side locks. Aluminum painted. Weight 25 lbs.

If you handle or process small parts . . . you need Palletainer 'Juniors'!



'Junior' Palletainers fold down quickly and easily to save over 75% of their open area. Saves storage space, makes handling easier and lowers return shipping costs.

Try these tested, proved-in-service containers for all types of parts handling. They'll actually pay for themselves in handling savings. Write today for complete information, prices and delivery dates.

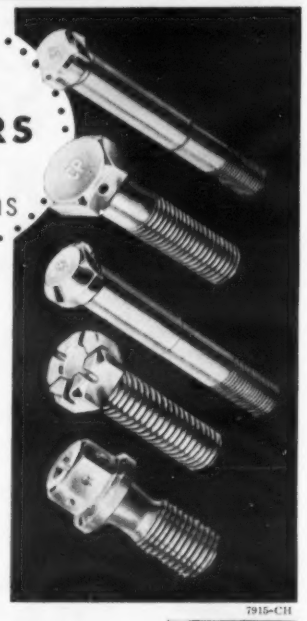
Palletainers are manufactured exclusively by

UNION STEEL PRODUCTS CO.
505 N. Berrien St., Albion, Michigan

MANUFACTURING PLANTS ALSO IN COMPTON, CALIF. AND WATERLOO, QUEBEC, CANADA

For more details circle NED-678 M8 on enclosed inquiry slip

precision metal **FASTENERS** to your specifications



Chandler makes "precision" a reality . . . not just a "catch word". Here's how . . . constant production control assures high quality fasteners with the ultimate in uniformity, accuracy . . . and economy. Chandler's rigid inspection standards mean you get fasteners that provide maximum resistance to stress, vibration and shear. For over 25 years Chandler has supplied the automotive, engine and aircraft industries with . . .

- Self-Locking Place Bolts
- Connecting Rod Bolts
- Automotive Special Bolts
- Special Aircraft Engine Bolts
- "AN" Aircraft Engine Bolts
- "NAS" Aircraft Bolts

If you're looking for fasteners to meet your very special requirements, write us today.

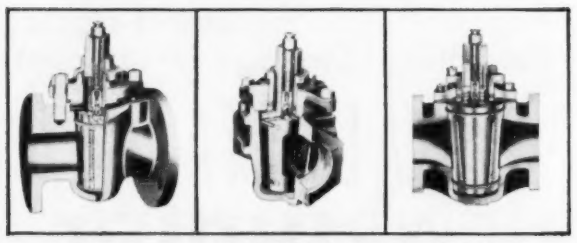
7915-CH

Write today for Bulletin 1264-CH

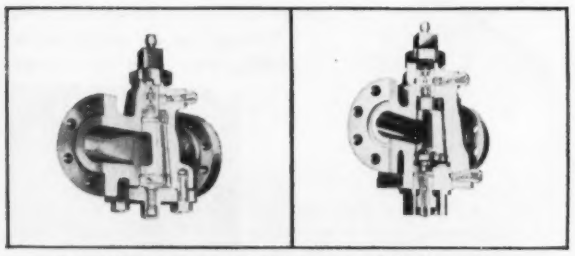
CHANDLER PRODUCTS CORPORATION
1495 Chardon Road • Cleveland 17, Ohio

For more details circle NED-679 M8 on enclosed inquiry slip

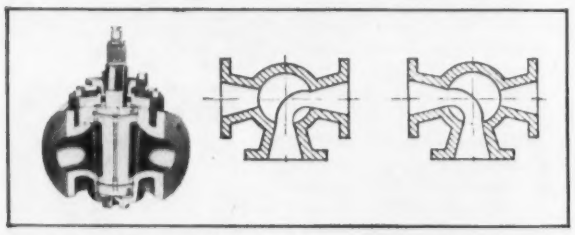
What are your valve needs?
SPECIFY FROM
ROCKWELL-NORDSTROM'S
COMPLETE VALVE LINE



For working pressures from 175-lb to 800-lb, Rockwell-Nordstrom valves are available in semi-steel and corrosion resisting alloys in sizes from 1" to 24".



For working pressure to 10,000-lb, Rockwell-Nordstrom Hypreseal valves are available in steel and corrosion resisting metals in sizes to 30". Operated by wrench, gear or power actuators.



Rockwell-Nordstrom Multiport valves permit three and even four way control with one valve . . . ideal for batching, blending or relief service. See diagrams for a few of the possible flow arrangements.

Rockwell-Nordstrom is the world's most complete line of lubricated plug valves, plug valve lubricants and operating accessories. Whatever your needs, you'll get better flow control at far lower cost when you specify from the Rockwell-Nordstrom line.

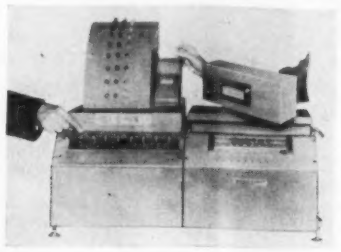
Rockwell Manufacturing Co., Pittsburgh 8, Pa.
Canadian Valve Licensee: Peacock Brothers Limited.

Circle No. 680 on the reply card in this magazine for free details.

ROCKWELL-Nordstrom VALVES
it's ROCKWELL
MANUFACTURING COMPANY

For more details circle NED-680 M8 on enclosed inquiry slip

SCALE & POSTAGE PRINTER
handles up to 500 packages per hour



Up to 500 parcel post packages an hour are handled by the Post-O-Printer combination automatic scale and postage printing machine. The integrated, electro - mechanical unit reduces package shipping to a one-machine, one-man operation. Package is placed on platform, button is pressed, and printed postage is immediately delivered. Made by **Detecto Scales, Inc.**, 540 Park Ave., Brooklyn 5, N. Y.

For more details circle NED-681 M8 on enclosed inquiry slip

MERCURY BATTERY PACKS
used as secondary voltage standards

Series of mercury battery packs, used as low-cost secondary voltage standards, will supply precise constant voltage to measuring circuits with resistive transducers, analog computers used as a reference source, or for calibration of lab and field instruments. Direct voltmeter or V.T.V.M. readings can be made. Packs of any desired voltage can be made up from combinations of basic cells. Each cell has nominal open circuit voltage of 1.357 v, $\pm 1/2$ per cent. Voltage declines by only 1 per cent in 2 years of storage at 70° F. On short run missile flight and atmospheric sounding tests, regulation of one part in 10,000 can be obtained. Voltage remains stable within 1 per cent over a −40 to 160° F range. Made by **Mallory Battery Co.**, 60 Elm St., North Tarrytown, N. Y.

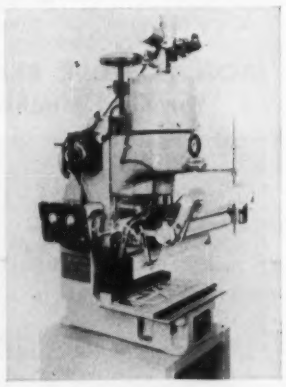
For more details circle NED-682 M8 on enclosed inquiry slip

AUTOMATIC TANK DRAIN
electronic unit for air compressors

Automatic removal of accumulated water from air compressor tanks is provided by this electronic tank drain, a $2\frac{3}{8}$ x $2\frac{3}{8}$ x $8\frac{1}{4}$-in. unit mounted on or near the compressor. With each cycle of the compressor the electronic tank drain is momentarily energized for a rapid purge of the accumulated water. After a 2 to 3 sec blow-down, it closes and resets for the next cycle. It is available for operation on 115, 230, or 440 v. Made by **Squire-Cogswell Co.**, 4151 N. Kedzie Ave., Chicago 18, Ill.

For more details circle NED-683 M8 on enclosed inquiry slip

HOT STAMPING HEAD
increases marking press stamp area



Offered optionally on new presses, this supplemental hot stamping head is also available to extend the capacity of the standard Model 250H Acroleaf marking press. It provides an increased stamping area of up to 12-in. length by $2\frac{1}{2}$-in. width. The increased length adapts press to hot stamping in gold, silver, or any color on book covers, signs, rollers, nameplates, instruction plates, scales, instruction charts, and calibrated parts. Machine provides $9\frac{1}{2}$ in. adjustment underneath the die and has throat depth of 8 in. Maximum stroke is 4 in. Press delivers 4800-lb marking pressure on 100-psi air. The head, complete with automatic adjustable foil advance for roll leaf up to 13 in. wide, scrap foil rewind, and other conversion accessories, is priced at $658. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

For more details circle NED-684 M8 on enclosed inquiry slip

PORTER PORTABILITY

CUTS METAL CUTTING COSTS!

HKP® PORTER CUTTERS

The "take it to the job" feature of PORTER CUTTERS makes them an absolute **must** in modern production, maintenance, service and materials handling operations! And you save time, labor, and money, too, with these powerful metal-cutters! There are over 100 different PORTER CUTTERS — HAND and POWER-OPERATED — that will cut just about any soft, medium hard, or hard metal you can name!

WRITE FOR YOUR FREE PORTER CATALOG TODAY!

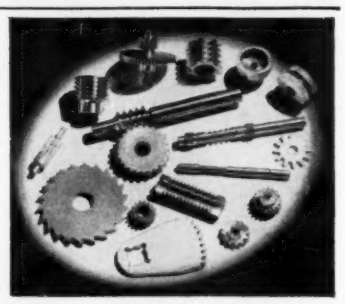
See Your Industrial Supply Distributor For Prompt Service.

CUT — up to ¾" rods with HAND OPERATED TOOLS — up to 1⅜" rods and 2½" power cable with POWER OPERATED TOOLS.

H.K.PORTER, Inc.
Somerville 43, Mass.

For more details circle NED-685 M8 on enclosed inquiry slip

when you want precision... get Abart



CUSTOM-CUT *Gears*

Abart carries no stocks. Every gear is precision-cut to the customer's specifications. Spur, spiral, bevel, helical, internal, worm, rack and sprocket—in any quantity, from any material.

Send B/P and specs or sample for quotation. 96 pitch to 5/7 D. P.—¼' P. D. to 18" P. D.

Write for Abart Gear Bulletin

ABART GEAR and MACHINE CO.
4831 WEST 16th STREET • CHICAGO 50, ILLINOIS

For more details circle NED-686 M8 on enclosed inquiry slip

This NUGENT FILTER will handle pressures to **3000 P.S.I.**

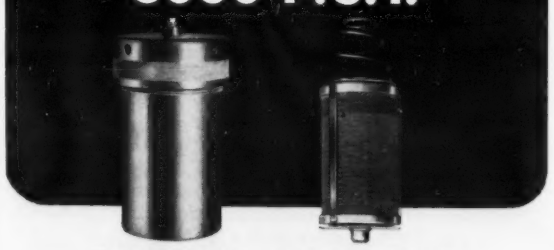


Fig. 1555CP-0 Filter Fig. 1555E-0 Cartridge

Here's a completely new series of Laminated Fiber Disc Filters from Nugent. Designed for hydraulic and other high pressure applications, 1555CP filters are rated for 3000 psi working pressures. Comply with ASME code for Unfired Pressure Vessels. Five sizes available with wide capacity range. Bottom inlet, outlet and drain. Write or phone for complete data.

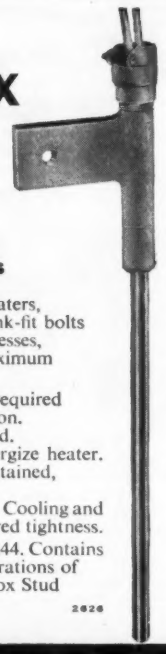
ESTABLISHED 1897
WM. W. NUGENT & CO., INC.
3402 CLEVELAND STREET • SKOKIE, ILLINOIS

REPRESENTATIVES IN PRINCIPAL CITIES

OIL FILTERS • STRAINERS • TELESCOPIC OILERS
OILING AND FILTERING SYSTEMS • OILING DEVICES
SIGHT FEED VALVES • FLOW INDICATORS

For more details circle NED-687 M8 on enclosed inquiry slip

NEW CHROMALOX STUD HEATERS



for shrink-tightening large studs and bolts

With Chromalox Electric Stud Heaters, you can easily and accurately shrink-fit bolts on steam pressure vessels, large presses, motors, turbines . . . wherever maximum tightness is desirable.

1. Choose stud heater of wattage required to produce desired stud expansion.
2. Drill largest possible hole in stud.
3. Insert heater into hole . . . energize heater.
4. When maximum expansion is attained, draw down bolt.
5. De-energize and remove heaters. Cooling and contraction draws down to desired tightness.

FREE! Send for new Bulletin L-1244. Contains detailed product description, illustrations of how to use, and table of Chromalox Stud Heater sizes, ratings and prices. 2626

CHROMALOX *Electric Heat*
INDUSTRIAL • COMMERCIAL • RESIDENTIAL
EDWIN L. WIEGAND COMPANY
7509 Thomas Boulevard • Pittsburgh 8, Pa.

For more details circle NED-688 M8 on enclosed inquiry slip

Commander
MULTI-ANGLE DRILL UNIT

- Compact—only 2⅝" wide x 10¾" long
- Drills on close centers
- Low cost
- Simple, fast set-up

PRICE ONLY $125.00

MULTI-ANGLE Drill unit is a complete, compact drill unit that easily adapts to special drilling problems where tooling space is limited. Ideal for angle drilling. Adapts to many power sources—flexible shaft, air or electric motors. Hydraulic spindle actuation—up to 4" stroke.

Write for complete details and name of nearby Commander Distributor

Commander MFG. CO.
4220 W. KINZIE ST., CHICAGO 24, ILLINOIS

For more details circle NED-689 M8 on enclosed inquiry slip

You get 10 big Integral-Motor-Pump advantages in these two NEW types (three models) of

GAST ROTARY VANE AIR PUMPS

Model 0211
1/6 hp, to 1.3 cfm, 25 psi or 27" vac.

Model 0321
1/4 hp, to 2.2 cfm, 25 psi or 28" vac.

Model 0521
1/3 hp, to 3.8 cfm, 20 psi or 28" vac.

*0321 similar in appearance.

1. Latest type G.E. "Form G" motors.
2. More compact than other pumps.
3. Total weight reduced 1/3—cuts shipping costs.
4. Motor mounting time and labor eliminated.
5. Simple, trouble-free rotary-vane design.
6. Vanes take up their own wear automatically.
7. Positive displacement, pulseless air delivery.
8. Improved appearance—smoother exterior.
9. Dependable for original equipment; plant use.
10. Forced air fan cooling on Models 0321 & 0521.

Write for new Bulletins V-356 and P-356! **Gast Manufacturing Corp.** P.O. Box 117-R Benton Harbor, Michigan.

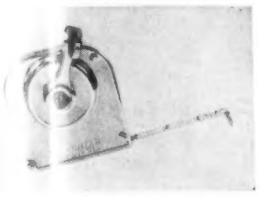
See Catalog in Sweet's Design File

GAST ROTARY
- AIR MOTORS TO 7 H.P.
- COMPRESSORS TO 30 P.S.I.
- VACUUM PUMPS TO 28 IN.

"Air may be your answer!"

For more details circle NED-690 M8 on enclosed inquiry slip

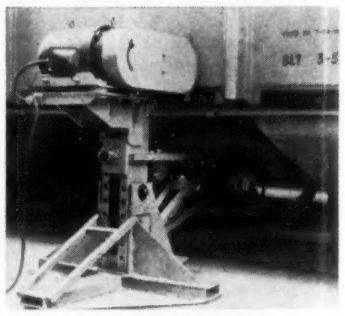
STEEL MEASURING TAPE
gear box achieves fast rewind



An integral gear box in Speed Chief steel measuring tape facilitates three times faster rewind than with standard tapes. It also provides a free-wheeling effect when pulling the tape out. As much as 50 ft of tape can be wound up in 8 sec. Diecast case is chrome plated and can easily be taken apart for tape replacement. All internal fittings in the gear box and the tape are stainless steel, and the precision gearing is self-lubricating. Made by **H. K. Porter Co.**, Disston Div., Unruh & Milnor Streets, Tacony, Philadelphia 35, Pa.

For more details circle NED-691 M8 on enclosed inquiry slip

RAILROAD CAR SHAKER
unloads obstinate bulk materials



One man can attach this Model 81 covered car shaker to a hopper car in less than 5 min. Using the same powerful vibrating mechanism offered in the original open - top hopper - bottom car shaker, the Model 81 will move the most obstinate bulk materials, including silica sands, sulfur, powdered plastics, cement, and ores. In cases where the contents of the whole car can be dropped from a trestle or into a pit, the entire car can be unloaded in 4 to 10 min. Unit is powered by a 5-hp, 220/440 or 550-v, 60-cycle, three-phase, 1750-rpm motor and has a weatherproof manual pushbutton starter. Made by **National Conveyor & Supply Co.**, 361 N. Harding Ave., Chicago 24, Ill.

For more details circle NED-692 M8 on enclosed inquiry slip

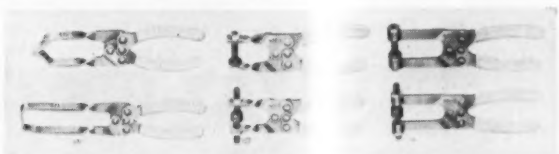
TIME SWITCH
rated 55 amp at 120/240 v ac

Control of substantial loads under severe operating conditions is possible with the 2100 Series heavy duty time switch. Manual switching is possible. Rated 55 amp at 120/240 v ac, the switch has a synchronous, self-starting motor which maintains uniform speed in ambients from −20 to 150° F. Dials are available with four trippers for two "on" and "off" operations daily. An optional omitting device with a 7-day dial eliminates the "on" operation on selected days. Minimum "on" period is ½ hr and maximum "on" period is 23½ hr. Made by **Paragon Electric Co.**, Two Rivers, Wis.

For more details circle NED-693 M8 on enclosed inquiry slip

TOGGLE CLAMPS
equipped with spring-action and screw spindle adjustable jaws

Flex-o-matic toggle clamps for all types of holding operations are die cut and formed from high carbon steel and have stainless steel rivets fitted into burnished



pivot holes. Four of the six models have tempered, flat, spring-action jaws to automatically compensate for material thicknesses from the preset dimension to an additional ⅜ in. Two these models have a preset 0-in. jaw gap and require no adjustment spindle.

The other two models combine automatically adjusting flat spring-action with standard De-Sta-Co screw type spindle assemblies and have up to 350-lb holding pressure. On quantity orders, the clamps can be altered in various ways and provided with plastic coatings to prevent marring. All have Safety-Ease plastic handle grips. Made by **Detroit Stamping Co.**, 350 Midland Ave., Detroit 3, Mich.

For more details circle NED-694 M8 on enclosed inquiry slip

Safe-Tread

all the way with USS Multigrip

Smooth-edged, flat-topped risers mean that every square inch of Multigrip Floor Plate will give sure-grip traction and comfortable footing. These tough steel plates won't chip, crack or splinter—and they last for years with hardly a sign of wear. Cleaning? Simple—a hose or broom does a thorough job. You can bend or form Multigrip whenever necessary, and it's available in large plates, eliminating installation waste. Protect your ramps, floors, aisles, steps and platforms by "safe-treading" with USS Multigrip Floor Plate. United States Steel, 525 William Penn Place, Pittsburgh 30, Pa.

USS and Multigrip are registered trademarks.

Sold by leading distributors from coast to coast

USS United States Steel

MICRO SWITCH Precision Switches

NEW

"EX1" SERIES

UL listed explosion-proof switches

Series "EX1" switches have a conduit opening at both ends of the housing. This permits through wiring, which saves costs and space and makes a neat installation. Housings have ample room for wiring, and have tapped holes in top, back and bottom for easy mounting.

These switches are available with four types of basic switches with electrical capacities of from 10 to 20 amps., and a choice of contact arrangements. Listed by Underwriters' Laboratories for use in hazardous atmospheres of Class I, Group C (ethyl ether vapor, ethylene, or cyclopropane) and Group D (gasoline, hexane, naphtha, alcohols, acetone, lacquer solvent vapors, and natural gas); Class II, Group E (metal dust, including aluminum, magnesium and their commercial alloys), Group F (carbon black, coal or coke dust), and Group G (flour, starch, or grain dust).

For additional information, ask for Catalog 83, or call the MICRO SWITCH branch office near you. Consult the Yellow Pages.

MICRO SWITCH . . . FREEPORT, ILL.
A division of Honeywell
In Canada: Honeywell Controls, Ltd. Toronto 17, Ontario

Honeywell
MICRO SWITCH PRECISION SWITCHES

For more details circle NED-695 M8 on enclosed inquiry slip

SOLVE BEND RADII & TORSION FATIGUE PROBLEMS

SEND FOR THIS INFORMATIVE CATALOG TODAY. OVER 2,000 DIFFERENT TYPES, STYLES & SIZES AVAILABLE

USE CHIKSAN SWIVEL JOINTS!

When moving parts cause tight bend or torque on hose lines or when design dictates the use of metal lines, Chiksan Swivel Joints can provide the ready solution. Full 360° rotation, infinite service life, and high safety factor enable Chiksan Joints to literally pay for themselves after short periods of use.

CHIKSAN COMPANY
BREA, CALIF., CHICAGO 5, ILL., NEWARK 2, N. J.
Subsidiaries: Chiksan Export Co., Chiksan of Canada Ltd.

For more details circle NED-696 M8 on enclosed inquiry slip

HOW TO CUT COSTS

Learn how users of Raymond narrow aisle trucks are realizing tremendous labor and space savings in their warehouses or plants. These authentic reports describe the problems firms like your own have faced, how they solved them and the benefits they now enjoy. Perhaps you'll find the idea or solution to your own problem. Check the Raymond User Reports you'd like to receive . . . mail coupon TODAY!

CHECK, CLIP & MAIL

- ☐ No. 1 PRINTER cut curbside unloading 5 hours to 1 hour.
- ☐ No. 2 WHOLESALE GROCER gained 11,000 square feet usable storage space.
- ☐ No. 3 REFRIGERATED WAREHOUSE saved $4,840 annually in labor and storage area.
- ☐ No. 4 METAL WORKING FIRM increased productivity 5%.
- ☐ No. 5 WHOLESALE GROCER gained added storage space — increased number of items 25%.
- ☐ No. 6 SEED COMPANY cut handling costs 50%, increased storage capacity.
- ☐ No. 7 MILLWORK DISTRIBUTORS speeded up box car unloading, saved $15,000 labor costs.
- ☐ No. 8 DAIRY PRODUCTS MFGR. saved $140 per week in labor costs.
- ☐ No. 9 WHOLESALE GROCER returned 280% on investment of Raymond Walkie.
- ☐ No. 10 METAL STAMPING PLANT eased die handling labor, freed man for other duties.
- ☐ No. 11 FARM IMPLEMENT MFGR. gained $200,000 worth of added storage space, returning 800% on investment.
- ☐ No. 12 CHEESE PROCESSOR handles four times as much cheese with half the original warehouse crew.
- ☐ No. 13 STORAGE BATTERY MFGR. raised production efficiency, improved working conditions.
- ☐ No. 14 METAL STAMPING FIRM increased storage capacity 300%; reduced handling operations.
- ☐ No. 15 METAL STAMPING FIRM eliminated manual die handling; investment was returned in 12 months.
- ☐ No. 16 ALUMINUM FOUNDRY moves more tonnage in shorter period of time.
- ☐ No. 17 GENERAL WAREHOUSE utilized maximum storage space; simplified inventory count.
- ☐ No. 18 FROZEN FOOD MFGR. gained 6,000 cubic feet storage. Saved 60c per cubic foot.
- ☐ No. 19 SHOE MANUFACTURER saved $72 in labor per box car for unloading hides.
- ☐ No. 20 DRUG WAREHOUSE increased daily tonnage handling 50% with same receiving crew.

The RAYMOND CORPORATION
4179 Madison St., Greene, N. Y.

NAME TITLE
COMPANY
STREET
CITY STATE

For more details circle NED-697 M8 on enclosed inquiry slip

New Literature and Catalogs

Special Purpose Alloys

Carpenter Steel Co., Alloy Tube Div.—Bulletin T.D. 125 describes special purpose alloys for tubing and pipe used in the aircraft, missile, rocket, nuclear energy, and chemical fields. Sizes, gages, finishes, chemical composition, and properties are given, along with fabrication data.

For more details circle NED-698 M8 on enclosed inquiry slip

Maintenance Products

Kano Laboratories—Available from this company are two informative folders, one containing descriptions and application on such products as Kreen penetrating solvent oil, Tak which makes gummed tape adhere better, Graphoil penetrating lubricant, and Kroil, a "chemical tool" of many uses. "Maintenance Ideas" folder contains a wealth of ideas on the use of these products in many diverse applications.

For more details circle NED-699 M8 on enclosed inquiry slip

Molded & Extruded Plastics & Rubber

Geauga Industries Co.—Cross sections and sample parts representing the variety of compression molded and extruded products this company produces from various natural and synthetic rubbers and plastics are shown in 18-page illustrated brochure. Secondary operations which are performed are described.

For more details circle NED-700 M8 on enclosed inquiry slip

Crane Conductor Systems

Cleveland Crane & Engineering Co.—Crane and runway electrification using aluminum inverted-Y conductor systems, and requiring currents of 500 to 1200 amp is subject of Booklet No. 1. Equipment covered includes fittings and current collectors for conductor systems mounted on wall or ceiling.

For more details circle NED-701 M8 on enclosed inquiry slip

Power Presses

Johnson Machine & Press Corp.—Specifications for Johnson power presses can be checked easily in 8-page Catalog 1958-A which is compiled for ready reference. It covers 16 to 150-ton flywheel and back-geared inclinable presses; 40 to 250-ton single and double crank straight-side presses; 60 to 200-ton gap presses; and horn presses in 35 and 60-ton sizes.

For more details circle NED-702 M8 on enclosed inquiry slip

AC-DC Ammeters

Columbia Electric Mfg. Co.—Clamp-type Tong Test ammeters which measure both alternating and direct current are pictured in 8-page catalog along with detailed selection and ordering information. Special units for low current readings are also shown. The newest Model UV-1 voltmeter for measuring up to 600 v ac or dc is included.

For more details circle NED-703 M8 on enclosed inquiry slip

Leasing Fork Lift Trucks

Lewis-Shepard Products, Inc.—Three plans to acquire or lease fork lift trucks and other material handling equipment without tieing up working capital are described in 4-page circular. Plans permit leasing with full ownership later on, straight leasing, or the leasing of batteries and chargers for company-owned lift trucks.

For more details circle NED-704 M8 on enclosed inquiry slip

C-Frame Presses

Hydraulic Press Mfg. Co.—Available literature on C-frame presses up through 15-ton capacity includes 8-page Bulletin 58CPM. It describes function and operating characteristics of two new manually controlled presses. 12-page Bulletin 58CPA describes four new automatic models, including automatic with electrical controls, automatic with hydraulic interlock, and the same with electrical controls.

For more details circle NED-705 M8 on enclosed inquiry slip

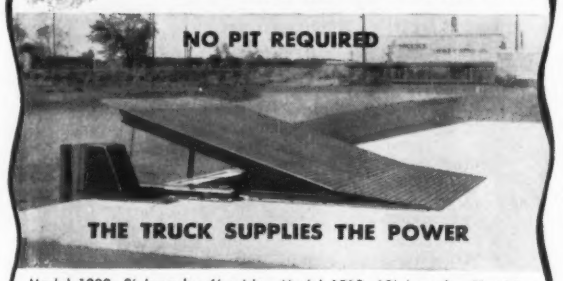
Dry Fluid Drives & Couplings

Dodge Mfg. Corp.—Expanded line of Flexidyne dry fluid drives and couplings featured in 24-page Bulletin A-640B comprises 10 stock couplings and eight stock drives ranging from fractional to 1000 hp and suitable for a wide range of applications. Bulletin outlines such advantages as the use of smaller motors to start heavy inertia loads, protection against overload, low current draw, smooth starts, and absence of slip.

For more details circle NED-706 M8 on enclosed inquiry slip

NOW! SOLVE THAT LOW DOCK PROBLEM Economically

NEW HI-LO AUTOMATIC DOCKBOARD



Model 1208; 8' long by 6' wide. Model 1210; 10' long by 6' wide.

SAVES TIME — Backing truck automatically adjusts long, wide ramp surface . . . speeds loading. Does away with labor-wasting placement and storage of loose plates.

SAVES EXPENSE — The HI-LO is simply lagged to top of present dock. Can't be lost, stolen, or damaged. Simple counterbalance system. No hydraulics, motors, or controls.

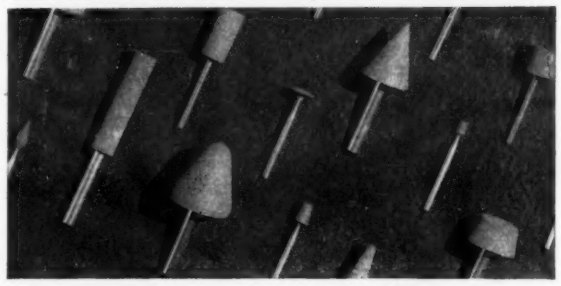
IMPROVES SAFETY — No more loose plate hazards. No lifting or straining. The HI-LO is a permanent part of the dock . . . cannot slip out of position.

HI-LO Automatic DOCKBOARDS

WRITE FOR COMPLETE LITERATURE

KELLEY COMPANY, INC.
2125-A W. Mill Road
Milwaukee 9, Wisconsin

For more details circle NED-707 M8 on enclosed inquiry slip



"Making better products . . . to make your products better"

In Norton mounted wheels, outstanding developments eliminate loading and glazing, assuring best results.

In tool and die grinding, mounted wheels with sharp 32 ALUNDUM* abrasive and VBE bond are the very best.

In rough grinding, *steel castings and weldments,* mounted wheels of tough 44 ALUNDUM abrasive and VBE bond, metal-mounted, are unequalled. *For snagging cast iron,* wheels of sharp 32 ALUNDUM abrasive and VBE bond, metal-mounted, outperform silicon carbide wheels.

Metal-mounting, locking the abrasive body to the mandrel means you throw nothing away but the mandrel! See your Norton Distributor for prompt deliveries.

NORTON COMPANY, General Offices, Worcester 6, Mass.

NORTON ABRASIVES

W-1882 *Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries

For more details circle NED-708 M8 on enclosed inquiry slip

✓ DEBURRING
✓ CHAMFERING
✓ FACING, POINTING

Here is the machine that eliminates the need for tying up expensive lathes and screw machines for deburring rods and tubes, and it profitably replaces such costly methods as hand rolling pieces against a sanding belt or holding them against a rotating brush. The Pines End-Finishing Machine is *fast* and *accurate.* It squares the end, removes all the burr from the inside, and makes a uniform, accurate chamfer on the outside. Women operators commonly deburr up to 800 1-inch tubes per hour. It clamps, feeds, finishes in one motion — leaves one hand free for stock handling. Machine illustrated handles stock up to 2" O.D. Automatic air-clamping units and models for stock up to 5" also available.

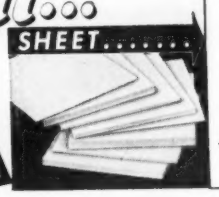
FREE BULLETIN
Find out how these machines save space and cut costs on wide range of work.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 641 WALNUT • AURORA, ILLINOIS
PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

For more details circle NED-709 M8 on enclosed inquiry slip

Teflon*...

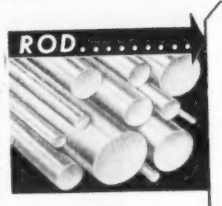
Your Best Source is JOHN CRANE



SHEET.....

Thickness Inches	Nominal Size
1/16	12 x 12
3/32	18 x 18
1/8	24 x 24
3/16	36 x 36†
1/4	48 x 48†
3/8	
1/2 & Up	

† Can be furnished in 1/2 sheets



ROD.....

DIAMETER INCHES	
1/4	1
5/16	1 1/16
3/8	1 1/8
7/16	1 1/4
1/2	1 3/8
9/16	1 1/2
5/8	1 3/4
3/4	2
7/8	2 1/4
	2 1/2
	3

Other diameters on specification

TUBING.....

TYPICAL SIZES INCHES	
O. D.	I. D.
3/8	1/4
1/2	3/8
3/4	1/2
1	3/4
1 1/2	1
2 1/2	1 1/2
3	1 3/4

HERE'S WHY: You can order in quantity, in a wide variety of sizes—and be certain of uniformity. Strict density control assures non-porous Teflon—free from any flaws that might affect end use or product. Dimensions are accurate—no rejects, waste of material, loss of time. You get product purity—Teflon at its best in every characteristic. Delivery is prompt—the quantity you want when you want it.

Request full information, including informative bulletin.

CRANE PACKING CO. 6411 Oakton St., Morton Grove, Ill., (Chicago Suburb) In Canada: Crane Packing Co., Ltd., Hamilton, Ont.

*DuPont Trademark

John Crane CRANE PACKING COMPANY

▲ For more details circle NED-710 M8 on enclosed inquiry slip ▲

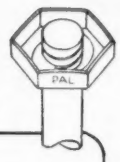
SAVE THREADING! SAVE SPACE!

Type RST

- - with new, compact flat hexagonal shaped

PALNUT® SELF-THREADING LOCK NUTS

Make their own threads - -



- - on plain UNTHREADED studs, rods, rivets or wire of zinc, aluminum, steel or brass.

Cost less than push-on nuts - - hold tighter - - drastically reduce seating area - - may be removed and re-used.

•

May be driven with internal wrench in restricted area.

PALNUT Self-threading Lock Nuts form deep, clean, strong threads while tightening on unthreaded studs and rod. Spring steel locking action holds tight whether seated or unseated. Easy, fast assembly with standard tools — extra fast with PALNUT Magnetized wrenches. Type RST available for 1/8", 5/32" and 3/16" dia. Write for details and free samples, stating type, size and application.

THE PALNUT COMPANY
45 Glen Road, Mountainside, N. J.
Canada: P. L. Robertson Mfg. Co., Ltd., Milton, Ont.

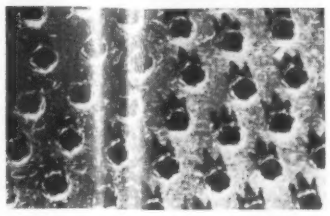
PALNUT® LOCK NUTS FASTENERS

Quick, secure fastening at low cost

▲ For more details circle NED-711 M8 on enclosed inquiry slip ▲

New Processes and Materials

FLEXIBLE STEEL ABRASIVE now offered in 9-in. width



Dragon-Skin flexible steel sandpaper is now available in a 9-in width in rolls up to 1600 ft long. The new width is in addition to the 4¼-in. width released originally. Comparable to medium grade conventional sandpaper, Dragon-Skin reportedly outcuts by five-to-one and outlasts by ten-to-one ordinary sandpaper products. It is made by punching 0.036-in. diameter holes, 150 per square inch, in 0.004 in. thick steel sheet, creating a uniform wave of five-sided burrs. Product can be used to rasp, sand, and smooth hard and soft woods, plaster, plastics, and soft metals. Made by **Red Devil Tools**, Box 355, Union, N. J.

▲ For more details circle NED-713 M8 on enclosed inquiry slip ▲

FLOOR RESURFACER is highly slip resistant

Extreme slip-resistant qualities are exhibited by Stoncap floor resurfacer which consists of a scientifically formulated powder and liquid binder. Resiliency imparts walking and standing comfort. Used to resurface floors, stairs, ramps, metal cat-walks, and stair treads, Stoncap resists greases, oils, fats, brines, and alkalies. It is ready for foot traffic in 5 hr, truck traffic in 24 hr. Resurfacer can be applied on wet surfaces and is available in maroon, gunmetal, forest and light green, and light gray colors. Made by **Stonhard Co.**, Dept. 130, 1306 Spring Garden St., Philadelphia 23, Pa.

▲ For more details circle NED-714 M8 on enclosed inquiry slip ▲

ALUMINUM MAGNET WIRE in No. 12 through 24 AWG sizes

Aluminum magnet wire for use in motors, solenoids, and generators is now available in initial AWG sizes of No. 12 through No. 24. The wire is available on spools or in pails and drums for easy dispensing and is made with Formvar, Nyform, and Isonel insulations. Wire is made from Alcoa aluminum by **Rea Magnet Wire Co.**, 3610 E. Pontiac St., Ft. Wayne, Ind.

▲ For more details circle NED-715 M8 on enclosed inquiry slip ▲

Campbell *

TAGS TAGS TAGS
for inventory
for shipping
TAGS TAGS TAGS
for identification
TAGS TAGS

* Campbell Box & Tag Company
Main & New Streets, South Bend 23, Ind.

▲ For more details circle NED-716 M8 on enclosed inquiry slip ▲

For air line lubricators ... there's
NO NEED TO STOCK A LOT OF SPARES!
With Gits, your Inventory's small;
JUST 1 SIZE HANDLES ALMOST ALL!

FOR AIRLINE LUBRICATION, GET THE DOPE ON GITS COMPLETE MATCHED SET, THIS NEW FREE CATALOG TELLS MORE, YOU'LL FIND ADVANTAGES* GALORE.

*Minimum Lubrication Waste, Minimum Pressure Drop, Instant Starting and many more.

GITS BROS. MFG. CO.
Pneumatics Division
1833A South Kilbourn Avenue
Chicago 23, Illinois

▲ For more details circle NED-717 M8 on enclosed inquiry slip ▲

Write for NEW

Brunner AIR COMPRESSOR CATALOGS

Here, for the asking, is the latest and most authoritative information on air compressors that you can obtain.

You'll find full engineering information on the use of compressed air; data that indicates the right compressor for a specific job; tables of computations for correct installation.

Ask for Catalog #36 for a guide to ½ through 2 H. P. Brunner air compressors.

For Brunner 25-30-40-50 H. P. industrial air compressor data, ask for catalog #37.

Send for Brunner catalogs today . . . on your letterhead, please.

BRUNNER SINCE 1906 GLOBAL AIR SERVICE

BRUNNER DIVISION
DUNHAM-BUSH, INC.
Dept. NED • WEST HARTFORD 10, CONN.

▲ For more details circle NED-712 M8 on enclosed inquiry slip ▲

Hose and hose fittings are easy to select from this 72-page Parker Catalog

It's easy to choose the best Parker Hose and Parker Hose Fittings to handle practically any gas from air to freon, practically any liquid from water to synthetic hydraulic fluids from the data, specs, and recommendations in the complete Parker Hose Fittings and Hose Catalog 4400. Also includes useful information on assembling both standard and Parker "no-skive" Hoze-Lok Fittings to 15 types of Parker Hose.

Your Parker Hose Fittings and Hose distributor, listed in the Yellow Pages, can furnish you a copy. Or write . . .

Parker FITTINGS AND HOSE DIVISION
17325 Euclid Avenue • Cleveland 12, Ohio
A DIVISION OF PARKER-HANNIFIN CORPORATION

▲ For more details circle NED-719 M8 on enclosed inquiry slip ▲

thanks to automatic xerography

. . . a revolutionary, new system *for the high-quality, low-cost, rapid reproduction of engineering drawings*

BENEFITS

- Quality superior to that of any other type of engineering drawing reproduction
- Substantial savings, up to $500,000 a year
- Storage space reduced up to 95%
- No sensitized paper required
- Time between request and print dramatically shortened
- Reduced-size prints make handling easier, slash material costs, cut postage

A spectacular breakthrough . . . as revolutionary as the invention of movable type and the printing press . . . has become a reality because of the development of the XeroX® Copyflo® 24 continuous printer.

This ingenious machine . . . caricatured above by Artzybasheff and operated automatically by xerography . . . now provides the full benefits of a unitized microfilm system, the modern approach to low-cost, high-quality reproduction of engineering drawings.

Original drawings are copied onto microfilm, and individual frames mounted in data processing cards. Insertion of the cards into the Copyflo printer automatically produces dry, positive prints (or offset paper masters) ready for immediate use. A 24" x 36" print every 10 seconds!

Where the reproduction of hundreds . . . or thousands . . . of *different* engineering drawings is needed daily, look to automatic xerography and unitized microfilm.

WRITE today for Booklet X-287 detailing the many advantages.

HALOID XEROX INC.
58-221X Haloid St., Rochester 3, N. Y.
BRANCH OFFICES IN PRINCIPAL U. S. AND CANADIAN CITIES

HALOID XEROX®

▲ For more details circle NED-720 M8 on enclosed inquiry slip ▲

New Literature & Catalogs

Drum Type Controllers

Seely Instrument Co.—Drum type controllers combined with electric timers are adaptable for a wide range of process and cyclical operations. Models for various applications are detailed in 8-page bulletin.

▲ For more details circle NED-721 M8 on enclosed inquiry slip ▲

Hydraulic Presses

American Chain & Cable Co., ACCO Equipment Div.—Comprehensive illustrated Bulletin DH-125 is devoted to manual and air-operated hydraulic presses. They range from 3-ton mechanical arbor presses to 25, 40, 60, 80, 125, and 150-ton power units. Specifications of all units are presented and accessories are described.

▲ For more details circle NED-722 M8 on enclosed inquiry slip ▲

Barrel Finishing Compounds

Oakite Products, Inc.—Compounds for deburring, burnishing, and descaling metals in barrel operations are subject of 8-page Booklet F9339R3. It emphasizes the necessity for the right combination of media, solution, speed, and loading. Precleaning and media selection data are included.

▲ For more details circle NED-723 M8 on enclosed inquiry slip ▲

Machine Tools & Accessories

Ex-Cell-O Corp. — Comprehensive 88-page illustrated, wire-bound catalog covers boring, custom and transfer grinding, jet blade profiling and finishing, vertical contouring, and vertical boring machines. Other products included are Ex-Cell-O precision spindles, drill jig bushings, and cutting tools of various types. Facilities for aircraft parts and dairy equipment production are also covered.

▲ For more details circle NED-724 M8 on enclosed inquiry slip ▲

Electrical Metallic Tubing

Rome Cable Corp.—Color coded, easy-to-fish electric metallic tubing for many applications is detailed in 12-page Bulletin RCP-100. Product uses, features, and manufacturing processes are covered. Charts relate the number of cables that each conduit size will carry. Installation data are given.

▲ For more details circle NED-725 M8 on enclosed inquiry slip ▲

Metal Stampings

Dayton Rogers Mfg. Co.—Facilities of this company for producing metal stampings in any quantity, large or small, from many materials, are outlined in 8-page Folder F185. Examples of typical products are shown.

▲ For more details circle NED-726 M8 on enclosed inquiry slip ▲

Carbon & Graphite Products

Stackpole Carbon Co.—56-page Manual 40B gives detailed property, application, and performance data on a wide range of carbon and graphite products. A number of mechanical, chemical, electrical, and refractory uses are detailed.

▲ For more details circle NED-727 M8 on enclosed inquiry slip ▲

CHRISTMAS SEALS AT WORK!

A most important medical discovery during the past year was a blood test for the detection of tuberculosis.

Made possible by your purchase of Christmas Seals — under a grant from the National Tuberculosis Association — it is now undergoing widespread trials.

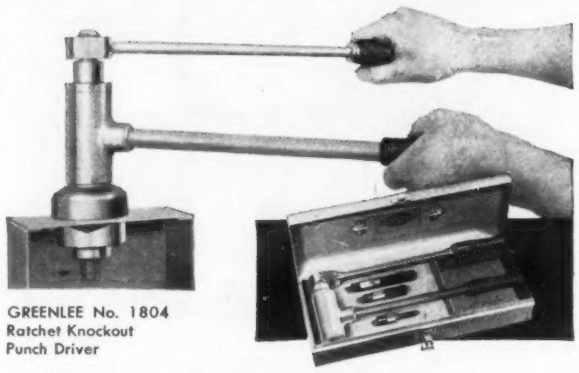
Continue the fight against TB — send in your contribution today.

Buy and use Christmas Seals

This space contributed to the National Tuberculosis Association and its affiliates by

NEW EQUIPMENT DIGEST

NEW-6 times faster! ratchet knockout tool



GREENLEE No. 1804 Ratchet Knockout Punch Driver

Special antifriction fast-lead thread gives super-fast cutting by hand! High-leverage ratchet action handle and ball bearing assembly give smooth, easy operation. Fits all GREENLEE Knockout Punches ½" - 3" for cutting through metal up to 10 gauge. Lightweight — only 6½ lb. Metal box sets, with or without punches. Request Bulletin E-289.

GREENLEE TOOL CO.
1952 Herbert Avenue, Rockford, Illinois

▲ For more details circle NED-728 M8 on enclosed inquiry slip ▲

RUGGED McGILL® portable lampguards last longer

McGill portable lampguards are designed and built specifically to take the punishment of industrial use. Their use avoids frequent and costly replacement. Extra heavy cages are electrically welded and zinc-plated with chromate finish. Choice of handles include neoprene-butyl, wood and impact resistant molded phenolic. With LEVOLIER switches and 660 watt 250 volt sockets, McGill portables offer much more service for little more in price.

No. 7100-SR Gray neoprene-butyl handle, reflector. No Rol cage switch. Thumb clamp allows quick lamp changing without tools.

Available from your Electrical wholesaler

Write for McGILL catalog No. 84

engineered electrical products
McGILL®
precision needle roller bearings

McGILL MFG. CO., INC., Electrical Div., 151 N. Campbell St., Valparaiso, Ind.

▲ For more details circle NED-729 M8 on enclosed inquiry slip ▲

For Star Performance . . .
(and your Facial Protection "Best Buy")
AO H-3 FACE SHIELD

Always insist on Trademarked Safety Products

American Optical COMPANY
SAFETY PRODUCTS DIVISION

SOUTHBRIDGE MASSACHUSETTS
Branches in Principal Cities

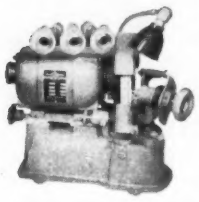
1833-1958 • 125 LEADERSHIP YEARS

▲ For more details circle NED-730 M8 on enclosed inquiry slip ▲

Cut Drill Costs!

Eliminate expensive "outside" sharpening . . . or time-costly "hand-sharpening"! BLACK DIAMOND (up to 3/4" Drills) or WORCESTER (up to 2½" Drills) DRILL GRINDERS are always set up to sharpen 1 or 100 drills . . . change sizes in seconds. Your most inexperienced man (or woman) can easily restore like-new sharpness to dull drills in ten seconds, and pay for your unit in months!

Get this Folder



FOR DRILLS UP TO 3/4"

World-famous BLACK DIAMOND DRILL GRINDER grinds both lips at once. "Positive Positioning" assures absolute accuracy . . . automatically. Always set up, ready to work. Web-thinning simple, too, with special attachment provided.

FOR DRILLS UP TO 2½"

WORCESTER DRILL GRINDER sharpens 2, 3 or 4 lip drills . . . flat, flat-twisted or chucking. Clearances easily and instantly changeable, feeding is controlled by micrometer adjustment. Precision design assures perfect grinding every time.

BLACK DIAMOND
SAW AND MACH. WORKS
72 North Avenue, Natick, Massachusetts

▲ For more details circle NED-731 M8 on enclosed inquiry slip ▲

S.S. WHITE Plastic Plugs and Caps give your product full protection against damage in handling, storing or shipping. Your customers can remove them easily, and your production line will save valuable minutes in installation time. WILL NOT SHRED, leaving debris in your product. THE ECONOMY LINE is of flexible elasto-plastic vinylite . . . retains elasticity; gives a stay-put fit and a non-slip grip. THE QUALITY LINE of rigid acetate is tough, non-brittle, impervious to petroleum-base oils and greases.

A complete range of sizes and types to fit every price range! Write for literature and samples. ASK FOR BULLETIN P-5708. It contains full details on the S.S. WHITE Plastic Plug and Cap line, including sizes, dimensions, etc. (Dept. 7P).

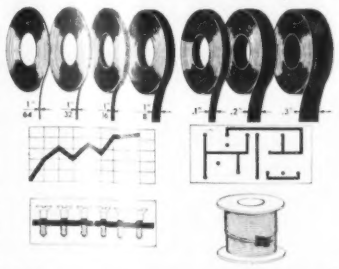
S.S.White PLASTICS DIVISION
10 East 40th Street, New York 16, New York
Western Office: 1839 West Pico Blvd., Los Angeles 6, Calif.

▲ For more details circle NED-732 M8 on enclosed inquiry slip ▲

New Processes & Materials

NARROW-SLIT TAPES
in rolls as narrow as 1/64 in.

Vinyl, Mylar, and acetate plastic; aluminum foil; paper; glass; and cotton cloth are among the many materials available in handy pressure-sensitive roll tape form. Tapes can be slit as narrow as 1/64 in. with tolerance of ±0.005. They are used in sealing and wrapping many core, roll, and spool wound products; in printed circuit layouts; small wire and terminal marking; holding small parts together; and marking maps and charts. More than 20 different tapes are available, many in colors for coding and marking. Made by **W. H. Brady Co.**, Dept. NED, 727 W. Glendale Ave., Milwaukee 9, Wis.



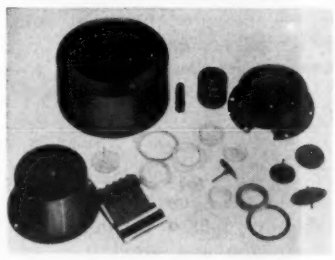
▲ For more details circle NED-733 M8 on enclosed inquiry slip ▲

TEFLON HOSE
offered in diameters to 3 in.

Larger volumes of chemicals, acids, and other active solutions can be handled safely now that Teflon hose is available in diameters up to 3 in. Previous limit was 1¼ in. because of the material's surface characteristics and manufacturing problems. The Flexlon hose can be made with the Hydro-lok flange which avoids the use of metal couplings. Able to withstand heat up to 325° F (depending on size and construction), and possessing a smooth surface, it can be sterilized to permit handling food products. Caking solutions are handled efficiently since nothing adheres to the Teflon tube. It resists most known chemicals. Made by **Raybestos-Manhattan, Inc.**, Manhattan Rubber Div., 61 Willet St., Passaic, N. J.

▲ For more details circle NED-734 M8 on enclosed inquiry slip ▲

SILICONE RUBBER PARTS
molded to close tolerances to order



Precision parts formulated of silicone rubber feature resistance to fuels, oils, solvents, moisture, ozone, and weathering. They also have long shelf life without deterioration and retain flexibility in temperature extremes of −130 to 500° F. Parts are molded to tolerances as close as ±0.002 in. on a thickness of 0.007 in. Assistance is provided in developing parts to meet a wide range of design problems. Made by **Sierra Engineering Co.**, 123 E. Montecito Ave., Sierra Madre, Calif.

▲ For more details circle NED-735 M8 on enclosed inquiry slip ▲

STEEL FRAMING ANGLE
slot and hole pattern facilitates assembly into racks, tables, carts

A recurring precision pattern of slots and holes facilitates assembly of AIM Brand slotted framing angle into a variety of structures. This cold-rolled galvanized steel angle is packaged in 10 and 12-ft lengths, 10 lengths to the package, with 75 structural bolts and nuts. Each ⅜-in. bolt rated 2000 lb safe-load capacity. Friction-type joints are made by bolting through vertical and horizontal slots, whereas rigid, lock-joints are formed by bolting through the round holes.

Angle is stamped every in. along both flanges with cutting marks to simplify measuring. Standard 225-80 angle measures 2¼ x 1½ x 0.080 in.; heavy-duty 300-104 measures 3 x 1½ x 0.104 in. Accessories include steel panels for shelving or table tops, channels for shelving assembly, and casters for cart or bin structures. Made by **Acme Steel Co.**, 135th Street & Perry Avenue, Chicago 27, Ill.

▲ For more details circle NED-736 M8 on enclosed inquiry slip ▲

Ro-Flo COMPRESSORS
Peak efficiency at all times

An automatic compensating feature in *Ro-Flo* design offsets any wear on rotor blades, insuring constant efficiency. Blades move in and out of longitudinal slots. Centrifugal force keeps them in constant contact against cylinder.

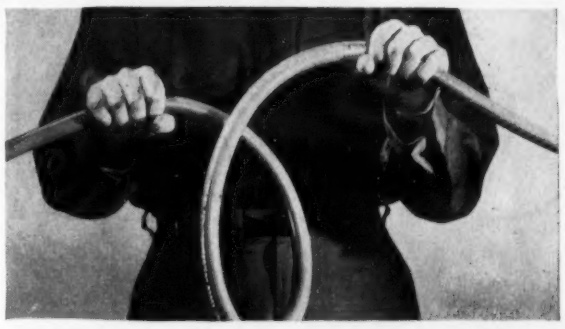
RATINGS — *Twelve* sizes of two-stage *Ro-Flo* compressors from 250 to 1800 cfm at pressures 60 to 125 pounds gauge. *Twenty* different single-stage units handle pressures to 50 pounds gauge and from approximately 50 to 3200 cfm.

For complete information ask for Bulletin 16B8244. Call your nearby A-C office or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wisconsin.

Ro-Flo is an Allis-Chalmers trademark.

ALLIS-CHALMERS A-5613

▲ For more details circle NED-737 M8 on enclosed inquiry slip ▲



Now . . . improved Sealtite E.F.

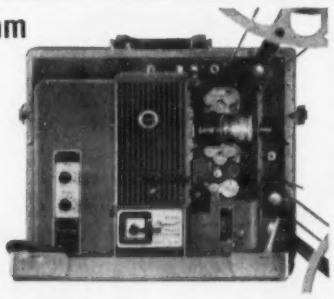
Sealtite type E.F.* – the original flexible, liquid-tight conduit, first to meet J.I.C. requirements – is now better than ever. New design has made it stronger, tougher, more durable in service . . . easier to install. Heavier extruded PVC jacket offers greater resistance to abrasion, cutting and tearing . . . greater oil resistance . . . greater holding power for fittings. It is more flexible – permits smaller bending diameters. New convenient markings save time, prevent waste. Length is indicated by arrows at 1-foot intervals. Trade size in inches is shown on cover. In black or gray. For free sample and more information, write: The American Brass Company, American Metal Hose Division, Waterbury 20, Conn.

*Pat. Applied For 57180 Rev.

SEALTITE® flexible, liquid-tight conduit
an ANACONDA® product

▲ For more details circle NED-738 M8 on enclosed inquiry slip ▲

SHOW YOUR 16mm SOUND MOVIES on this LOW-COST PROJECTOR



Now, for little more than the cost of a good *silent* projector you can get the new, low-cost Kodak Pageant *Sound* Projector, Model AV-085. Lists for only $439.00.*

Powerful 8-watt amplifier is designed around modern printed circuits that make it more compact, rugged, easy to service. 11-inch oval speaker is housed in a baffled enclosure for good response over the entire frequency range.

Super-40 Shutter and 750- or 1000-watt lamp capacity provide extra screen brilliance. Model AV-085 has new Pageant tungsten carbide pulldown tooth that's virtually wearproof. New 3-wire power cord meets all municipal electrical codes, adapts for ungrounded outlets, too.

You *never* oil this new Pageant (or any other Pageant)! It's lubricated for life at the factory. Setups are fast, easy. Reel arms fold down with belts attached, ready to run. Film path is printed on machine, simple to follow.

FREE BOOKLET, Bulletin V3-22, gives full details. Write for it.

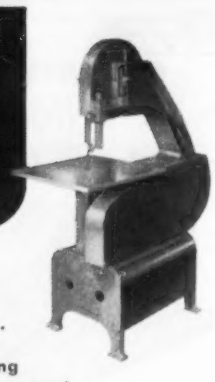
*List price, subject to change without notice.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

▲ For more details circle NED-739 M8 on enclosed inquiry slip ▲

LOCKFORMER
BETT-MARR
BAND SAW



- 24" throat without 24" bulk . . .
- Variable speeds without speed reducer power losses . . .
- Heavy-duty, production cutting at half the price you'd expect to pay!

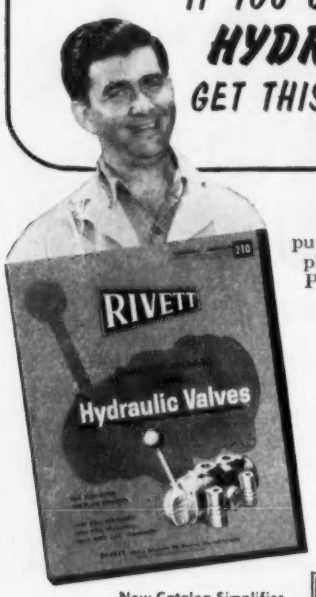
Big enough for almost any sawing job, small enough to fit most anywhere, the Lockformer Band Saw's low cost makes it a practical and profitable investment for *any* shop. Blade speeds of 100, 600 and 3000 fpm give production speed cutting on wood, plastics, forgings, steel plate, non-ferrous metals and stainless steels. Ball bearings with neoprene seals, cemented carbide blade guides, friction-free and slip-proof chain for final drive and many other top-quality features.

WRITE FOR bulletin giving full facts.

THE LOCKFORMER CO.
Dept. N 4615 West Roosevelt Road
Chicago 50, Illinois
In Canada: Brown Boggs Foundry & Machine Co., Ltd., Hamilton, Ontario

For more details circle NED-740 M8 on enclosed inquiry slip

IF YOU USE HYDRAULICS—GET THIS FREE BOOK!



Rivett Catalog No. 210 puts at your fingertips complete information on 3000 PSI, Sub-Plate Mounted, Manually Controlled, Series 6100 Hydraulic Valves. Shows performance ratings, flow charts, dimensions, mountings, and ordering instructions. Check on such features as greater flow capacity! (the 1" size is rated at 28.2 gpm at 15 ft. per sec.) Write for your copy of Catalog No. 210!

New Catalog Simplifies Selection and Ordering!

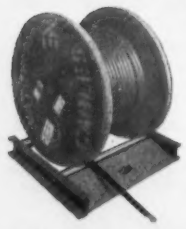
RIVETT

RIVETT, INCORPORATED
Dept. NED-12, Brighton 35, Boston, Massachusetts
Rivett Furnishes A Complete Power Package

For more details circle NED-741 M8 on enclosed inquiry slip

Style "B" 4,000 lbs. cap. for 2 reels up to 24 in. wide each or 1 reel up to 48 in. wide. (weight 110#)
PRICE — $84.50
F. O. B. Cincinnati

Lowest Cost . . . Least Effort
HANDLE REELS THE MODERN WAY



Put the "eeze" in handling reels, fast, easy, efficient, safe.

WIRE-ROPE-CABLE

- No jacks
- Handle any reel diameter
- Heavy steel frame
- Slanted front
- Ball-bearing adjustable rollers
- Positive roller lock for unloading

Style "A" 2,000 lbs. cap. for reels up to 28 in. wide. (weight 60#)
PRICE — $46.50
F. O. B. Cincinnati

(SPECIAL SIZES QUOTED ON REQUEST.)

Order today . . . or write for details

ROLL•A•REEL 4630 Reading Road Cincinnati 29, Ohio

For more details circle NED-742 M8 on enclosed inquiry slip

New Literature & Catalogs

Aluminum Conduit Pipe Fittings

Conduit Nipple Mfg. Co.—Line of aluminum conduit standard and extra-large radius elbows, pipe couplings, and nipples which carry the UL label is described in illustrated Catalog 205. Sizes range up to 6 in. Specifications of each type are included, as is a price sheet.

For more details circle NED-743 M8 on enclosed inquiry slip

Sprayed Metal & Ceramic Coatings

Metallizing Engineering Co.—Basic engineering data Bulletin 136A on wire and powder sprayed coatings of metals and ceramics covers hardness, tensile, and bond strengths of various coatings, plus various mechanical and electrical-electronic applications. Various types of spraying equipment, including automatic controls for production use, are covered.

For more details circle NED-744 M8 on enclosed inquiry slip

Special Tap & Gage Pricing

Beloit Tool Corp., Regal Div.—Latest manual features simplified and direct pricing of special taps and gages. Information relates to right hand and left hand taps, either on standard or short blanks, and to plain plug, special thread, double end reversible, and carbide tipped gages. Data are included on standard taps, drills, and gages.

For more details circle NED-745 M8 on enclosed inquiry slip

Industrial Lubricants & Solvents

Sun Oil Co.—Industrial products dealt with in folder are general and specialty lubricants, greases, mine lubricants, diesel lubricating oils, metalworking oils, hydraulic oils, heat-transfer oils, rubber process aids, waxes, petrochemicals, spray oils, solvents, refrigeration oils, electrical oils, and textile machine lubricants.

For more details circle NED-746 M8 on enclosed inquiry slip

Battery & Power Connectors

Cannon Electric Co.—Revised 20-page Catalog GB-7-2958 descriptively covers battery connectors for engine starting, simplifying battery change, and general power use. Principal application of connectors covered is connection of auxiliary power equipment to aircraft electrical systems. Plugs are designed for high current-capacity and battery disconnect uses.

For more details circle NED-747 M8 on enclosed inquiry slip

Stenciling-Labeling System

Sten-C-Labl Inc.—There is a Sten-C-Labl to fit every multiple shipping need, according to descriptive folder. They are prepared at the same time invoice, order, bill of lading, or shipping papers are made up. Folder describes their preparation and application to cartons or tags.

For more details circle NED-748 M8 on enclosed inquiry slip

Recorders, Controllers & Indicators

General Electric Co.—Bulletin GEA-6792 contains 12 pages of information on single and multipoint strip-chart recorders and recorder-controllers, round-chart recorders, circular scale and precision indicators, and control forms. Data given aid in selection and application.

For more details circle NED-749 M8 on enclosed inquiry slip

Tubular Products

J. Bishop & Co., Platinum Works—Information on types, grades, lengths, finishes, and general characteristics of small diameter stainless steel, nickel, and nickel alloy tubing; glass-to-metal sealing alloys; super and precipitation hardening alloys; and fabricated tubular parts is given in 16-page Catalog 12. Tables and charts supplement the reference material.

For more details circle NED-750 M8 on enclosed inquiry slip

Pilot Lamps

Dialight Corp.—Two illustrated Bulletins 100 and 101 deal with high brightness neon lamps and heavy duty oil-tight pilot lights, respectively. Technical information aids in selection and application.

For more details circle NED-751 M8 on enclosed inquiry slip

Spherical Roller Bearings

Torrington Co.—Five standard series of self-aligning spherical roller bearings are covered in illustrated Catalog 258. Bore sizes range from 40 to 1060 mm. Dimension tables, load ratings, and line graphs showing modifying speed and life factors are included. Nineteen pages of general data are also included.

For more details circle NED-752 M8 on enclosed inquiry slip

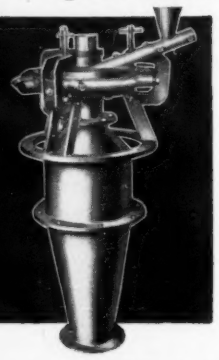
1ST IN METAL TOOL BOXES
CASES—CHESTS—CABINETS
Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for *FREE* book, including complete information.

Waterloo
VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

For more details circle NED-753 M8 on enclosed inquiry slip

MICRON-GRINDING speeded!

STURTEVANT MICRONIZER* GRINDING MACHINES REDUCE PARTICLES TO MICRON SIZES AT RATES FROM ½ LB. TO 3000 LBS. PER HOUR . . . WITH NO ATTRITIONAL HEAT



NO MOVING PARTS! Particles grind each other. High speed rotation and violent impact are caused by jets of compressed air or steam. Centrifugal force keeps over-sized particles in grinding zone. Cyclone action in central section classifies and collects fines for bagging.

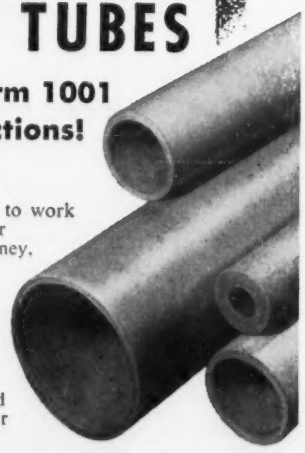
EASY TO CLEAN AND MAINTAIN! All seven sizes of Sturtevant Micronizer* Grinding Machines are constructed for instant accessibility (typified by the "OPEN-DOOR" design in other Sturtevant equipment).

WRITE FOR BULLETINS on Sturtevant Micronizer* Grinding Machines and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.
*®

STURTEVANT
Dry Processing Equipment
The "OPEN-DOOR" to *lower* operating costs over *more* years
CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

For more details circle NED-754 M8 on enclosed inquiry slip

SONOCO PAPER TUBES
perform 1001 functions!



Maybe you can put them to work . . . and you may get better performance and save money, too! Thousands of plants are using economical SONOCO paper tubes for a wide variety of purposes. Available in diameters up to 48", in practically any length and wall thickness. Outside and inside finished to meet your requirements.

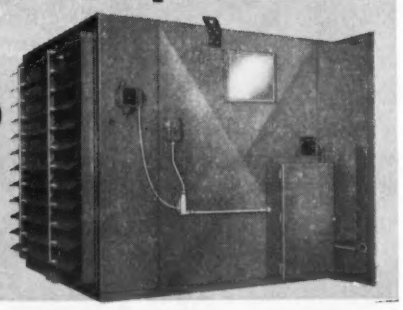
Think you can use SONOCO *paper tubes? We'll help you decide. Write to—*

SONOCO
Paper Products
SONOCO PRODUCTS COMPANY
1605 MAIN OFFICE—HARTSVILLE, SOUTH CAROLINA
PLANTS FROM COAST TO COAST

For more details circle NED-755 M8 on enclosed inquiry slip

draft-free comfort uniform temperatures

with new Aerovent GAS FIRED



air make-up units

Temper and filter outside air entering work areas for better production; more efficient heating. Eliminate infiltration of cold air – equalize pressures. Supplied for natural, mixed, manufactured and propane gases. Sizes 36" to 54". Capacities 15,000 to 45,000 cfm with ratings to 4,500,000 btu. Other types for steam and hot water.

Write for Bulletins 850 and 870

CERTIFIED PERFORMANCE

Aerovent FAN CO INC.
Ash and Blake Sts. Piqua, Ohio

▲ For more details circle NED-756 M8 on enclosed inquiry slip ▲

Now... MORE ball bearing types and a bright, new package

Hoover is widely known as a leading producer of open, shielded and sealed types of deep-groove ball bearings, double row bearings and water pump bearings. These Hoover products have earned a long standing reputation for quality.

Now, three new series are added to the Hoover line: 1) pillow block bearings and companion flange bearings; 2) 3L00 extra light bearings for maximum shaft and minimum housing dimensions; 3) "Super Max" bearings for maximum capacity applications.

All these new bearings meet Hoover's high quality standards. All are made with smooth *Hoover Honed* raceways and *Micro-Velvet* balls, accurate within millionths of an inch. All are designed for superior performance and long life.

New, too, is the distinctive blue and yellow package, designed to help you recognize Hoover bearings quickly and to remind you that they are *tops in quality*.

hoover
BALL AND BEARING COMPANY
5400 South State Road, Ann Arbor, Michigan
Los Angeles Sales Office and Warehouse: 2020 So. Figueroa, Los Angeles 7, Calif.

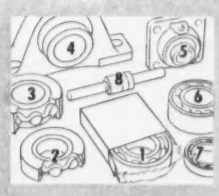


Chart at Left Identifies Bearings Pictured Above

- ☐ 1. Single Row Deep-Groove Bearing.
- ☐ 2. Lubricated-for-life Bearing with Seals of TEFLON*
- ☐ 3. Cartridge Bearing.
- ☐ 4. Pillow Block Bearing.
- ☐ 5. Flange Bearing.
- ☐ 6. Double Row Bearing.
- ☐ 7. 3L00 Extra Light Bearing.
- ☐ 8. Fan and Water Pump Bearing.

USE SQUARES TO CHECK THE INFORMATION YOU WANT. THEN FILL IN AND RETURN THIS COUPON.

Name ____
Title ____
Company ____
Address ____
City ____ Zone ____ State ____

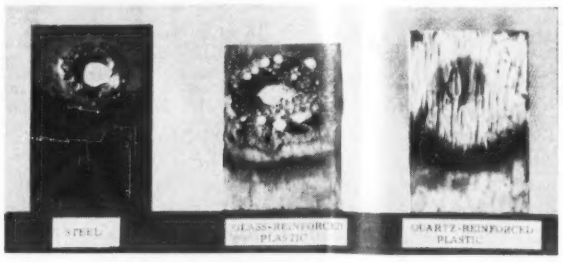
Hoover Honed and *Micro-Velvet* are Hoover trademarks.
*TEFLON is a DuPont trademark.

▲ For more details circle NED-757 M8 on enclosed inquiry slip ▲

New Processes & Materials

QUARTZ THREAD when woven into cloth forms exceptional heat barrier

Gossamer-thin, continuous monofilaments of fiber made from pure quartz and twisted into thread form a lightweight, extremely heat-resistant material. The thread



can be woven into cloth on textile equipment, and has possible use in reinforcing plastics used in aircraft and missiles. Commercial and industrial applications include filters, thin insulation in flexible or irregular form, safety devices, and heat-resistant plastic structural forms.

Cloth has the basic properties of glass fabric with the high heat resistance of quartz and good tensile strength at elevated temperatures. Fibers are available in short lengths, or as continuous thread. Photo shows test results of equally thick panels of steel, glass-reinforced plastic, and quartz-reinforced plastic when submitted to 5000° F torch flame for 40 sec. The quartz-reinforced plastic withstood the flame and retained its structural strength. Developed by **General Electric Co.**, Lamp Div., Nela Park, Cleveland 12, Ohio.

▲ For more details circle NED-758 M8 on enclosed inquiry slip ▲

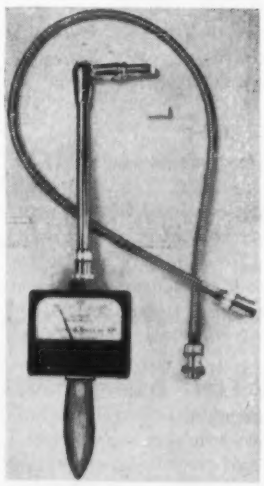
ANTIFRICTION LUBRICANTS have no melting or dropping point

Constant protection to roller, ball, and sleeve bearings and sliding surfaces in hot bearing applications, or in high ambient heat areas is provided by two antifriction lubricants. Compositions have no melting or dropping point, are moisture resistant, have high chemical stability and metal adherence properties, will not wash out, and have temperature reducing qualities as well as high extreme pressure values. Light density composition No. 1 is recommended for high speed, high heat uses, whereas heavier composition No. 2 is for low speed, high heat application, or loosely-fitted bearings. Both are offered in 14½-oz cartridges for use in lever-type cartridge guns and in bulk. A sample cartridge is available free. Made by **Whitmore Mfg. Co.**, 3816 Iron Court, Cleveland 4, Ohio.

▲ For more details circle NED-759 M8 on enclosed inquiry slip ▲

PYRO-SERV

SURFACE PYROMETER



Takes temperatures at any angle or deflection.

★

Quick disconnect interchangeable thermocouples.

★

Extra long, bold face type 3½ scale.

★

Gives precision measurements of surface and subsurface temperatures.

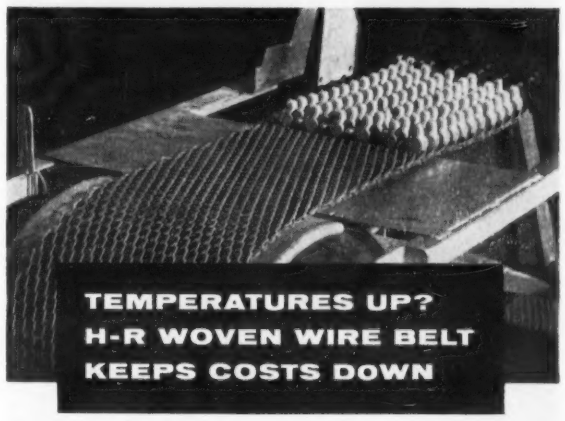
★

MODEL 1331 $89.50
Including Carrying Case

Write for free catalog

PYROMETER SERVICE CO., INC.
348 RIVER ROAD, NORTH ARLINGTON, NEW JERSEY

▲ For more details circle NED-760 M8 on enclosed inquiry slip ▲



Hewitt-Robins woven wire belts are available in a wide variety of alloys, in standard and special constructions, with mesh openings from 1/64" to 3". Their flexibility, strength, and draining and circulating characteristics meet the demands of conveying materials larger than 1/64". Whether your processing involves brazing heat, subzero cold, corrosive action of gases and liquids, or other destructive forces, an H-R woven wire conveyor belt will meet your needs.

To obtain your free copy of woven wire belt catalog No. 31, consult your H-R representative, or write Hewitt-Robins, Stamford, Conn.

HEWITT-ROBINS

CONVEYOR BELTING AND IDLERS . . . POWER TRANSMISSION DRIVES
INDUSTRIAL HOSE . . . VIBRATING CONVEYORS, SCREENS & SHAKEOUTS

▲ For more details circle NED-761 M8 on enclosed inquiry slip ▲

WIRE CLOTH PARTS

- Fast Service
- Long or Short Runs
- Low Cost
- ANY Metal
- ALL Meshes
- ANY Shape

SOLDER, BRAZE, WELD, FOLD CONSTRUCTION
For more information on this NEWARK Service, send for our Fabricated Parts Bulletin.

NEWARK WIRE CLOTH COMPANY
351 Verona Avenue • Newark 4, New Jersey

▲ For more details circle NED-762 M8 on enclosed inquiry slip ▲

NAMES IN THE NEWS!

Jupiter! Redstone!

Missile Development Centers are among the largest Government Defense users of Produc-Trol for research, production, manpower and other types of scheduling.

PRODUC-TROL Visual Control

not only schedules, But automatically checks with TIME, LINE and COLOR control

- Original cost and upkeep low.
- Schedules and time checks operations.
- Historical record to back it up.
- Bad situations show automatically.
- Its simplicity has put it into world-wide use.
- Analyze 100 items in 10 seconds.

Creator of Effective Tools for Effective Management

Phone Westport, Conn. CA 7-4111 or write
WASSELL ORGANIZATION, INC.
Westport, Conn.

Please send Free Booklet on Produc-Trol. NED
NAME ..... COMPANY .....
ADDRESS .....
CITY ..... STATE .....

▲ For more details circle NED-763 M8 on enclosed inquiry slip ▲

NOW! Adjustable Diameter and Open
THOMSON BALL BUSHINGS

The BALL Bearing for all your LINEAR MOTIONS

LOW FRICTION · ZERO SHAKE OR PLAY
ELIMINATE BINDING AND CHATTER
SOLVE SLIDING LUBRICATION PROBLEMS
LONG LIFE · LASTING ALIGNMENT

The various types cover a shaft diameter range of ¼" to 4". Small sizes available in Stainless Steel. Write for literature and name of our representative in your city.

THOMSON INDUSTRIES, Inc.
Dept. G, MANHASSET, NEW YORK

Also manufacturers of NYLINED Bearings
...Sleeve Bearings of DuPont NYLON

For more details circle NED-765 M8 on enclosed inquiry slip

WHAT'S YOUR SEAL RING PROBLEM?

Stackpole offers suitable carbon and graphite grades for practically all mechanical seal applications . . . PLUS modern facilities for "custom engineering" rings for special or unusually difficult uses. Send details of your seal ring needs for recommendation. *Stackpole Carbon Co., St. Marys, Penna.*

STACKPOLE

"EVERYTHING IN CARBON BUT DIAMONDS"

For more details circle NED-766 M8 on enclosed inquiry slip

FACTUAL NEW BOOK

on a unique (use it anywhere) check valve

Combined with practically any standard pipe fitting, the DURABLA *Basic-Check* Unit becomes a complete check valve—for almost any service. *It operates perfectly in any position...handles any liquid, gas or air.*

For the full story on these versatile valves, send for a free copy of this *new* booklet. Includes typical applications, construction details, table of sizes and weights, etc. Ask for Form 300 NED 128.

DURABLA MANUFACTURING COMPANY
114 Liberty Street, New York 6, N. Y.

DURABLA®

Patent No. 2,649,277 DM-28

For more details circle NED-767 M8 on enclosed inquiry slip

New Literature & Catalogs

Parts Feeding Systems

Radio Corp. of America, Industrial Automatic Equipment Section—A complete line of automatic parts feeders is described in 8-page Bulletin 3R3384. Machines covered include nonmar feeder orienters for handling fragile and highly finished parts, elevating oriented feed hoppers, stack feeders, and rotary hoppers.

For more details circle NED-768 M8 on enclosed inquiry slip

Self-Adhesive Wire Markers

W. H. Brady Co.—Described in 8-page Bulletin 130 are 4000 different self-adhesive wire markers which conform to NEMA, NMTBA, and ASA specifications. Where-to-use information on Perma-Code markers made of vinyl cloth, aluminum foil, oil resistant vinyl, thin polyester film, oilproof epoxy resin, acetate cloth, and other materials is included.

For more details circle NED-769 M8 on enclosed inquiry slip

Aerosol Spray Products

Crown Industrial Products Co.—Information on the history of aerosol spray products and their industrial uses today is subject of 16-page Booklet F-2500. Rust inhibitor, Kleer Kote plastic spray, Toolmaker's ink and cleaning oil, lubricating oil, wire rope lube, multipurpose grease, glass frosting, color code and other paints, and fire extinguisher are among products described.

For more details circle NED-770 M8 on enclosed inquiry slip

Small Cold-Drawn Tubing

Superior Tube Co.—"Selection and Application Guide" gives characteristics of seamless or Weldrawn small diameter, cold-drawn tubing, offered in various steels and alloys. Normal size range is 0.010 to ⅝ in. OD with 0.125 in. maximum wall thickness.

For more details circle NED-771 M8 on enclosed inquiry slip

Air Compressors & Paint Sprayers

Campbell-Hausfeld Co.—Selection of the proper equipment for air power requirements is simplified by 24-page descriptive Catalog CH-100 on a line of air compressors and paint spraying equipment. Uses for specific equipment are listed and illustrated along with construction specifications, model information, and performance data. A featured 3-step chart explains how air source, materials to be used, coverage, and finish determine spray gun choice for painting and other spray operations.

For more details circle NED-772 M8 on enclosed inquiry slip

Selecting a Slide Rule

Keuffel & Esser Co.—"Slide Rule? May I Help . . ." is title of 24-page guide for students or professionals who are about to select a slide rule. It covers scale designs and arrangements; the fine woods, glass and synthetic materials; and slide rule teaching aids and accessories. Pamphlet describes the standard Log Log Duplex Decitrig rule, Polyphase and Mannheim types, and various special purpose and pocket types.

For more details circle NED-773 M8 on enclosed inquiry slip

Cements, Adhesives & Sealants

Emerson & Cuming, Inc.—Series of technical bulletins comprising 14-page brochure "Plastics for Electronics" covers a variety of cements, adhesives, and sealants as to application and physical and electrical properties. Certain adhesives described are useful to 600° F; some retain flexibility to −100° F, and several are electrically conductive. Volume resistivity is comparable to that of metals.

For more details circle NED-774 M8 on enclosed inquiry slip

Coaxial Plugs & Cable Adaptors

Cannon Electric Co.—Aluminum shells used in ALRF Line of coaxial plugs and the ALA Line of cable adaptors effect a weight savings of about 35 per cent. 18-page Catalog ALRF-1 describes ALN and ALSC Series of RF plugs and the ALA Series of connector adaptors for joining Foamflex or Raytherm semirigid aluminum coaxial cable to standard RG cable.

For more details circle NED-775 M8 on enclosed inquiry slip

Chromium Plating of Small Parts

Whyco Chromium Co.—A series of information bulletins on barrel and rack chromium plating of small parts includes a technical progress report called "Whyco News" on the firm's services and facilities. Latter is planned to be a regularly published report. Included are illustrations and descriptions of Whyco services for burnishing, testing, lab work, and research.

For more details circle NED-776 M8 on enclosed inquiry slip

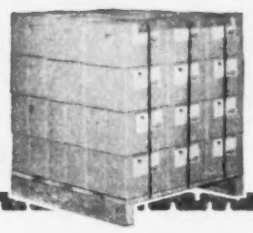
Whether you mark materials, parts, products or packages, there's a Markem machine ready to bring low cost, high production identification or decorative marking to your plant. From plastics to fabrics . . . transistors to camera parts . . . multi-color decorative marking to high production offset marking—there's a *Markem Method* to meet your marking needs. One source, with 47 years of experience in all industries, can supply the machines, type, inks, accessories and service you need. For complete information, write Markem Machine Company, Keene 3, New Hampshire.

MARKEM

EVERYTHING INDUSTRY NEEDS... FOR PROFITABLE MARKING... SINCE 1911

For more details circle NED-777 M8 on enclosed inquiry slip

SOUTHERN'S PALLETIZED SCREWS CUT YOUR COSTS!



Southern's advanced design palletized bulk system is based on proven engineering principles that individually or combined can save time, production and storage, regardless of the size of your operation:

1. A wire-bound telescopic-type 9 x 9 x 6½" corrugated container of heavy-duty 275# test, provides industry-accepted units for handling throughout your plant including your production line, where top of carton can "double" as individual bulk container. Adoption of Southern's famous EZ to C® label provides error-proof fastener identification.
2. AT NO EXTRA COST TO YOU Southern's new bulk cartons are prepared for shipment on sturdy 30" x 30" two-way entry pallets, each with four layers of nine cartons each, steel strapped for handling ease and security.

Phone or write for specific data about how Southern's Screws bulk system can be quickly put to work in your operation. Southern Screw Co., P.O. Box 1360, Statesville, N. C.

Machine Screws & Nuts • Tapping Screws • Hanger Bolts • Carriage Bolts • Wood Drive Screws • Wood Screws

Warehouses:
New York • Chicago
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Southern SCREW COMPANY

For more details circle NED-778 M8 on enclosed inquiry slip

The FEDERAL "55" gives you

OVERSIZE DIMENSIONS

Eliminates the need for larger, more costly equipment! Boosts production on big and bulky jobs!

Here's a press that will handle big, bulky jobs ordinarily requiring larger, more expensive equipment. Equipped with foolproof air clutch, its speed is increased many times, safely and with better control. Only the finest components are used in the "55". Workmanship, as in all Federal Presses, is unexcelled. Flywheel or geared. Mechanical clutch standard. Write.

FEDERAL PRESS COMPANY
806 Division St., Elkhart, Ind.

FEDERAL Open-back Inclinable PRESSES
33 Years of Quality Construction

For more details circle NED-779 M8 on enclosed inquiry slip

Ni-Rod "55" Electrodes help give crack-free welds between scrubber's cast iron cones and carbon steel tubes at Aerotec Corp., Greenwich, Conn.

Weld cast iron to carbon steel ...no preheat ...no cracking with Ni-Rod "55" electrode

Joints were cracking up between cast iron cones and carbon steel tubes in these gas scrubbers . . . because electrodes of iron and mild steel gave brittle welds. Weldors switched to Ni-Rod "55"* Electrodes . . . and eliminated weld cracks! And weldors find preheating generally unnecessary.

You can get trouble-free welds between cast iron and mild steel in all your jobs with Ni-Rod "55" Electrode; available from most jobbers.

"Repair Cast Iron Parts Quickly and Easily," handy Inco booklet, is yours for the asking. *Registered trademark

The INTERNATIONAL NICKEL COMPANY, Inc.
67 Wall Street New York 5, N. Y.

Inco Welding Products
electrodes • wires • fluxes

▲ For more details circle NED-780 M8 on enclosed inquiry slip ▲

▲ For more details circle NED-781 M8 on enclosed inquiry slip ▲

SKILMANSHIP • SKILMANSHIP • SKILMANSHIP

Amazing Sander-Plane Works 5 Ways —Files, sands, planes, shapes, notches.

An ideal tool for the school shop. Helps students obtain better results on their work. Sure-grip handle and guide knob make it convenient and easy to use. Speeds finishing and fitting of doors, windows, shelves, cabinet work and other projects. Permanently copper-brazed Tungsten Carbide abrasive works wonders on wood, composition, plastics. Simply turn blade for desired surface. Can be used on every finishing job. Controlled spacing of grit prevents clogging. Try the Perma-Grit brand Sander-Plane at your local hardware, paint or lumber dealer. Price, only $3.95.

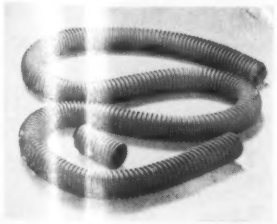
SKIL — Made only by SKIL Corporation, manufacturer of famous SKIL and SKILSAW products, 5033 Elston Ave., Chicago 30, Illinois.

SKILMANSHIP • SKILMANSHIP • SKILMANSHIP

▲ For more details circle NED-782 M8 on enclosed inquiry slip ▲

New Processes & Materials

FLEXIBLE NEOPRENE HOSE in 2, 2½, and 3-in. diameters



Extruded in continuous, seamless lengths, this flexible neoprene hose has spiral-ribbed construction which will retain its circular cross section even when subjected to sharp bends. Hose can be crushed without damage and resists deterioration by oxidation, ozone, oils, dilute acids, sunlight, and heat aging. It is used as duct for exhausting fumes, vapors, dust, and mists; for low pressure conveying of powdered materials; or for flexible connections on machinery for handling air or gases. Hose is produced in 2, 2½, and 3-in. diameters and lengths to 11 ft. Connector sections are available. Made by **Burton Mfg. Co.**, Dept. N, Burton, Ohio.

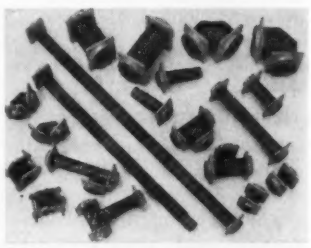
▲ For more details circle NED-783 M8 on enclosed inquiry slip ▲

GENERAL-PURPOSE SOLVENTS quick cleaning types dry rapidly

Grease, grime, and dirt can be removed from motors with KO 9 cleaner and degreaser by submerging them in the cleaner while running. Waterlogged motors that will not start are submerged for 1 hr until water and grease are dispersed, then submerged while running. Also suited for other electrical equipment, this rapid cleaning solvent evaporates rapidly. Large pieces of equipment can be cleaned by the spray method. Also available are KO 3 carburetor, metal parts, and engine cleaner which requires no rinsing and is noncorrosive and rust resistant; KO 12 for removing grease, oil, dirt, and grime from metal, wood, paint, and concrete by tank soaking, brushing, spraying, dipping, or wiping; and KO 13 concentrate (for diluting with water or kerosene) and KO 44 ready-to-use solvent, two general purpose products with many applications. Latter two are rinsed or hosed off with warm or cold water. Made by **KOR Corp.**, 5-Box 485, Gary, Ind.

▲ For more details circle NED-784 M8 on enclosed inquiry slip ▲

CORROSIONPROOF PIPE made of impervious graphite



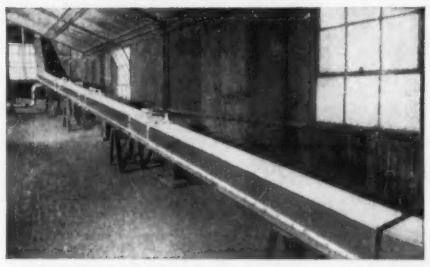
Unaffected by most corrosives except a few high oxidizing agents, Impervite impervious graphite pipe has a glass fiber armor for protection against physical abuse. It can be fitted easily in the field with only a hacksaw and a wrench. Standard ASA flange bolt circles permit attachment to existing equipment or other pipe. Pipe is noncontaminating and immune to the effects of thermal shock. It can be used up to 340° F and 75 psi hydrostatic or 50 psi steam. Standard lengths are 72 in. Tee, 45 and 90-deg ells, cross, blind flange cap, reducer, flexible coupling, and sight fittings are available. Made by **Falls Industries, Inc.**, 31945 Aurora Rd., Solon, Ohio.

▲ For more details circle NED-785 M8 on enclosed inquiry slip ▲

RIBBON CABLE offered in widths up to 3 in.

Parallel Teflon lead wires are woven with Teflon and other yarns into a flat, extremely flexible cable for pulling over rollers, coiling on drums, and for connections between chassis and panel doors. Tempbraid ribbon multiple-conductor cable is made in widths from ¼ to 3 in. By impregnating the yarns, slitting the ribbon is feasible for the construction of small, inexpensive harnesses. This form permits the use of many conductors in square or rectangular channels. Made by **Hitemp Wires, Inc.**, 1200 Shames Dr., Westbury, L. I., N. Y.

▲ For more details circle NED-786 M8 on enclosed inquiry slip ▲



F-H AIRSLIDE® . . . the conveyor with no moving parts

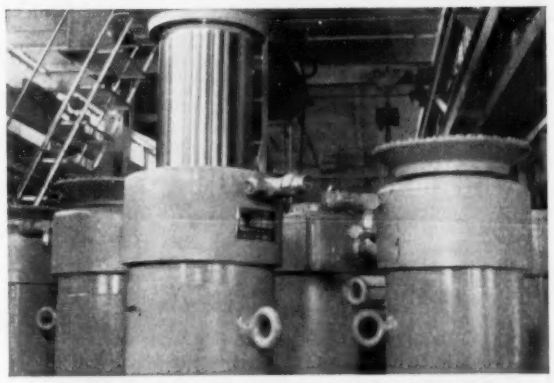
The F-H Airslide fluidizing conveyor is a revolutionary type of conveyor, using low-pressure air, and gravity, in which fine dry materials flow like water.

There are many reasons for the universal acceptance of this conveyor. Simplicity of construction and installation. Comparatively light in weight, it can be suspended from overhead or placed on the floor. No moving or working parts, maintenance is nil. Nothing moves but the material and air. Benefits are constant and substantial.

For complete information, write for Bulletin FH-2B.

FULLER COMPANY 3757 FH-54
154 Bridge St., Catasauqua, Pa.
SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION

▲ For more details circle NED-787 M8 on enclosed inquiry slip ▲



CROSBY-LAUGHLIN PAD EYES SAVE TIME

OEM's cut welding time by specifying drop forged Crosby-Laughlin* LOAD-RATED* Pad Eyes! Available in ¼" to 1¼" eye diameters and with wide, flat base that provides extra welding area for extra strength—safety. The *world's most complete line* of drop forged fittings meets a wide range of industrial applications. Free catalog has full specifications . . . dimensional data . . . U.T.S. and safe load capacities on more than 2000 items. Write:

*Trademark

CROSBY-LAUGHLIN *Division*
AMERICAN HOIST & DERRICK COMPANY
FT. WAYNE 1, INDIANA

▲ For more details circle NED-788 M8 on enclosed inquiry slip ▲

CUT SCRAP HANDLING COSTS

with **EC&M** Lightweight **MAGNETS**

• For fast-moving boom or crawler cranes, these EC&M Magnets (wound with aluminum strap conductor) give high lifts on light (wind-blown) scrap. They keep balers at top output ...place bales into cars...and handle heavier grades of scrap effectively.

Write for BULLETIN 1300

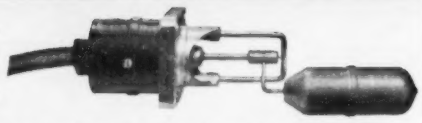
THE ELECTRIC CONTROLLER & MFG. CO.
A DIVISION OF THE SQUARE D COMPANY
CLEVELAND 28 • OHIO

7932-R

▲ For more details circle NED-789 M8 on enclosed inquiry slip ▲

For more details circle NED-790 M8 on enclosed inquiry slip

NEW low cost "LOW LEVEL" ALARM or SHUT-OFF SWITCH



Built to withstand shock and vibration of internal combustion engines, heavy highway equipment, air compressors, etc.

Can be used as alarm or shut-off unit for critical low level (or high level) in most any kind of liquid. Built to withstand pressures to 250 p.s.i.—absolutely leakproof.

Switch is magnetically driven by 2 powerful Indox magnets through a solid head forging—leakage is impossible. Switch is double throw, single pole—rated at 15 amps, 125 and 250 volts AC, ½ HP. Available in top and side mounted models.

The RMC Low Level Switch has been thoroughly tested for cycling endurance and vibration resistance—will stand a constant and reliable watch over operating equipment.

WRITE for complete technical and mounting data, or outline your particular requirements.

RMC
ROCHESTER MANUFACTURING CO.
114 ROCKWOOD ST., ROCHESTER, N.Y.
For more details circle NED-791 M8 on enclosed inquiry slip

INDISPENSABLE!

the new CATALOG C-5

Sier Bath
FLEXIBLE GEAR COUPLINGS

Invaluable information about the lowest priced, highest capacity flexible gear coupling available . . . a new, complete catalog covering everything from installation to engineering specifications. The entire range of Sier-Bath types and sizes at your fingertips, with details on special types also given.

Write today for Catalog C-5.

INSIDE the New Catalog
- Cost-cutting Advantages
- Simplicity of Installation
- Typical Applications
- Complete Specifications on Standard, Mill-Motor, Vertical Shaft, Floating Shaft, Spacer, Heavy Duty, Cut-Out and Shear-Pin Types.
- Enlarged section of Special Types
- Engineering Data

Sier-Bath GEAR and PUMP CO., INC.
FLEXIBLE COUPLING DIVISION
9242 Hudson Blvd., North Bergen, N. J.
Founded 1905 Member A.G.M.A.
For more details circle NED-792 M8 on enclosed inquiry slip

New Literature & Catalogs

Bacterial Inhibitor for Coolants

Eli Lilly & Co.—Elcide 75, a bacterial inhibitor that extends the life of soluble oil emulsions as much as five and one-half times, is subject of 12-page illustrated folder. Its effectiveness is shown in a series of bacterial plates. Use and specifications are detailed.

For more details circle NED-793 M8 on enclosed inquiry slip

Fiber Cartridge Filters

Cuno Engineering Corp. — Depth type fiber cartridge filters for full-flow filtration of all types of fluids are detailed in 12-page Micro-Klean Catalog 53-101. Advantages of "graded density" cartridge construction are explained. A chart aids in selection of the proper filter and cartridge for the application. Cartridge life curve and flow rate table are included.

For more details circle NED-794 M8 on enclosed inquiry slip

Heavy Duty Air Cylinders

Milwaukee Cylinder Co.—Series A heavy duty air cylinders, offered in 1½ to 14-in. bores and rated at 200 psi, are subject of 8-page illustrated Bulletin A-100. Specifications and mounting data are included. Illustrated Bulletin H-100 of 8 pages presents the same data for Series H hydraulic cylinders with 1½ to 12-in. bores and 2000 to 3000-psi ratings.

For more details circle NED-795 M8 on enclosed inquiry slip

Fractional Horsepower Motors

Carter Motor Co.—Universal, alternating and direct current, induction, and permanent magnet types of fractional horsepower electric motors are described in Catalog M 159. The Carter Ecliptic motors range from 1/1000 to 1/3 hp. Also covered are gear, governor, and brake motors.

For more details circle NED-796 M8 on enclosed inquiry slip

Cable Conveyors

E. W. Buschman Co.—Photographs in 4-page Bulletin 40A show Bush-Lock universal overhead trolley cable conveyors in use in metalworking, woodworking, food, textile, auto, aircraft, and service industries. Design is detailed in a cutaway view. Various components are shown, as are sample layouts.

For more details circle NED-797 M8 on enclosed inquiry slip

Semiconductors

Allied Radio Corp.—About 1000 transistors and diodes produced by 13 major manufacturers are covered in this semiconductor directory. Each is listed by part number, name of manufacturer, and OEM price in quantities up to 1000 units.

For more details circle NED-798 M8 on enclosed inquiry slip

Gas Welding, Cutting & Heating Equipment

Harris Calorific Co.—Specifications for extensive line of gas welding, cutting, and heating apparatus are contained in illustrated Catalog 586. Equipment for oxyacetylene, oxynatural, and oxypropane gas use is detailed. Included are torches and tips, regulators, and numerous accessories.

For more details circle NED-799 M8 on enclosed inquiry slip

Magnetic Amplifiers

Principles, construction, operation, and uses of magnetic amplifiers are amplified in 36 pages of illustrated Bulletin 1105-1. Cutaway drawings and exploded views show design details. Simplified schematic drawings show how they are incorporated in various types of equipment. Available only when requested on company letterhead from Vickers Inc., Electric Products Div., 1815 Locust St., St. Louis 3, Mo.

For more details circle NED-800 M8 on enclosed inquiry slip

Extending V-Belt Drive Life

B. F. Goodrich Industrial Products Co.—Catalog IP-1577 is entitled "How to Get Longer Life from V-Belt Drives." This 12-page manual tells how to select and install V-belts, how to detect trouble, diagnose belt failures, and correct drive troubles. Valuable tips are given for proper V-belt maintenance.

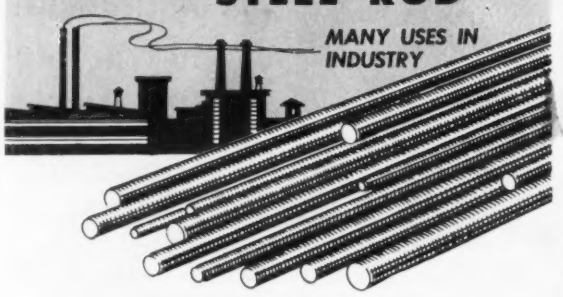
For more details circle NED-801 M8 on enclosed inquiry slip

Magnetic Shielding

Perfection Mica Co., Magnetic Shield Div.—Design and fabricating techniques for nonshock sensitive, nonretentive Netic and Co-Netic magnetic shielding are covered in detail in 32-page illustrated Manual 101-122. Standard gages and thin ductile foil are offered. Forty illustrations show a wide variety of shapes, sizes, and applications. Twelve pages of physical data are included.

For more details circle NED-802 M8 on enclosed inquiry slip

INSIST ON SINTZ COLD ROLLED THREADED STEEL ROD



ORDER FROM YOUR MILL SUPPLY HOUSE—INDUSTRIAL JOBBER OR DIRECT FROM

SINTZ threaded steel and non ferrous rod
COLD ROLLED THREADED—BENDS COLD
QUALITY • SERVICE • PRICE
Established 1912

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1928 STANLEY AVENUE
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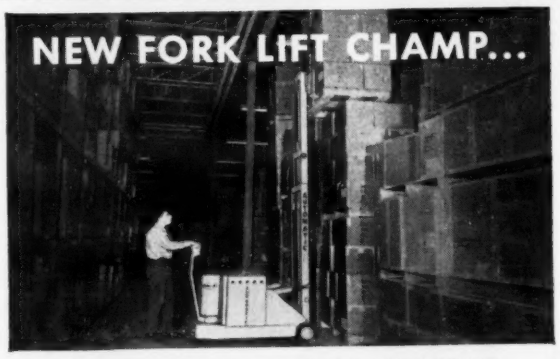
STUDS • FORMED RODS
PIPE PLUGS

For more details circle NED-803 M8 on enclosed inquiry slip

NEW FORK LIFT CHAMP...



Automatic Transporter Stacker Model WST Offers More Advantages Than Any Comparable Truck

INCLUDED ARE...
- Highest lift, 135" with 83" mast.
- Faster lift for speedier stacking.
- Twin-ram tilt prevents racking of mast.
- Short over-all length for easy maneuvering.
- Steering handle can be turned up to 200° for tight turns.
- Light weight permits work in places not safe for heavier trucks.
- Accommodates all standard attachments.
- Heavy duty Class-H Silicone insulated motors available on all models.
- Performs all functions of a rider-type machine yet costs less.
- Capacities (for loads up to 48" long) 1,000 to 4,000 lbs.

Write today for full details including convenient lease and purchase plans.

Automatic Electric Industrial Trucks Cost Less to Own...Less to Operate

AUTOMATIC TRANSPORTATION COMPANY
Division of The Yale & Towne Manufacturing Company
61 West 87th Street—Dept. X8—Chicago 20, Illinois

Electric Automatic Industrial Trucks

WORLD'S LARGEST EXCLUSIVE BUILDERS OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS
For more details circle NED-804 M8 on enclosed inquiry slip

YOUR CYLINDER ORDER SHIPPED IN 24 HOURS OR LESS!
—LET CARTER CARRY YOUR INVENTORY!

CARTER CYLINDERS

Get your cylinders *now.* No need to lose production! Carter will *ship your cylinder order in 24 hours or less,* to satisfy your needs. And when you buy Carter cylinders, you buy quality—rugged, dependable cylinders.

Leakproof construction . . . strong key-type locking of body between tubing and heads . . . compact, space-saving design . . . *plus special delivery to you.* Get in touch with us *today* for cylinders you need *tomorrow!*

CATALOG FILE! Air Cylinders; 750 lb. Hydraulic; 1500 lb. Hydraulic; Clamp Cylinders; Air Valves; Built-in Valve Types. Complete with parts data, specifications and prices. Send today!

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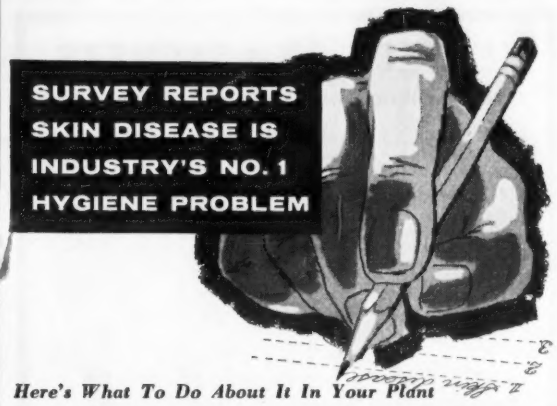
AIR CYLINDERS • AIR VALVES • HYDRAULIC CYLINDERS
ROTARY ACTUATORS • SPECIAL CONTROLS
For more details circle NED-805 M8 on enclosed inquiry slip



Here's What To Do About It In Your Plant

Recently, 2,177 major plants were surveyed by a market analyst to discover their No. 1 skin hygiene problem. The overwhelming majority of replies said: SKIN DISEASE.

The reasons for this answer: • skin disease means costly medical treatment • skin disease means prolonged absenteeism • skin disease means worker dissatisfaction and compensation claims.

What can you do in your plant to fight this problem? Call in an SBS skin cleanser representative. Most skin disease troubles can be traced to improper cleaning or use of the wrong cleaners. Your SBS representative is the man most completely equipped to study the situation and offer measures to improve it. He'll check all the conditions in your plant and recommend . . . not just a soap, but a *planned corrective skin hygiene program* for safe skin cleansing. Because Sugar Beet Products produces a *complete range* of cleansers, the SBS man can recommend the *exact ones* for your needs. Many famous firms are protected by SBS skin cleanser programs. Why not write us today? Dept. 58-L6.

sugar beet products co.
SAGINAW, MICHIGAN
CANADA: Chemical By-Products, Ltd., Rexdale, Toronto, Ont.

For more details circle NED-806 M8 on enclosed inquiry slip

• *Centerless Ground to extreme accuracy. Special new-type Equipment, assures concentric chamfered or formed ends—no cut-off burrs.*

Dowel—Straight—Countersunk—Angle and Spherical Ends
.020" to .1875" Diam.
.125" to 2" Length

Precise Specifications
Accurately met. If requested on order, a surface analysis tape, showing surface in micro-inch measurements, will be furnished. Tape magnifies 39,370 times.

Small orders or volume production to your exact requirements and material specifications.

Quality Precision Work!
Prompt Deliveries!
Prices you will like!
SEND US PRINTS FOR QUOTATION

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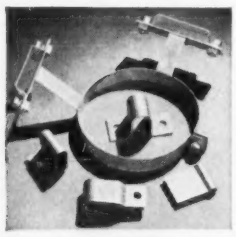
Phone: ENdicott 1-3412

For more details circle NED-807 M8 on enclosed inquiry slip

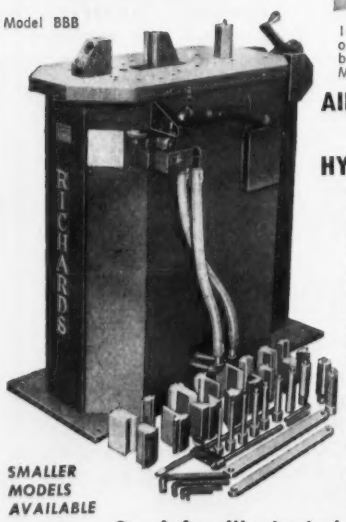
Multiform

BIG BROTHER BENDER



Illustrated above are a few of the many forms that can be produced efficiently on the Multiform Bender.

Model BBB



SMALLER MODELS AVAILABLE

AIR OPERATED MODELS IN FOUR SIZES
HYDRAULIC—3 MODELS

The heavy duty Big Brother Bender is designed for fabricating bus bars, brackets, fixtures, etc., without special tooling. Air controlled with finger tip response. Comes complete with dies, mandrels and wrenches—punching and blanking dies extra. Will punch holes up to 1" and form material up to ¼" thick by 4" wide. We also build smaller models, hand or air operated, for bending materials up to ⅛" x 1½".

Send for illustrated folder M6

J. A. RICHARDS CO. Myrtle & Pitcher Sts. Kalamazoo, Mich.

For more details circle NED-808 M8 on enclosed inquiry slip

New Processes & Materials

CONCRETE PATCH KIT adheres to steel, concrete, wood

Cracked, worn, and pitted concrete floors and surfaces can be effectively repaired with Epocrete, two-part epoxy-based concrete patch material that cures at room temperature with practically no shrinkage. It has greater compressive strength and abrasive resistance than concrete and holds to steel, concrete, and wood with more than 1000-psi adhesion strength. It can be used to reset bricks or support ornamental iron, seal up leaking cracks and joints in any masonry, and to resurface floors, driveways, and worn stair treads. It feathers to a fine edge and resists acids, alkalies, petroleum products, water, salt water, and solvents. One-quart, 4-qt, and 4-gal kits, as well as bulk quantities are available from **H. V. Hardman Co.**, 571 Cortlandt St., Belleville 9, N. J.

For more details circle NED-809 M8 on enclosed inquiry slip

TEFLON ADHESIVES resist water and many chemicals

Two adhesives for cementing bondable Teflon to itself or to other materials are two-component (base and activator) systems. They will bond etched Teflon to wood, steel, glass, aluminum, ceramics, plastics, or any other material that will bond with an adhesive. They can be cured at room temperature or elevated temperatures. Ray-Bond R-86009 adhesive, for applications where bond flexibility is required, has good resistance to water and most chemicals. Ray-Bond R-86044 has very good resistance to acids (except acetic) and various other chemicals, as well as water. Former can be used as a structural adhesive up to 120° F and as a nonstructural adhesive up to 250° F. Similar ratings for latter product are 200 and 250° F, respectively. Made by **Raybestos-Manhattan, Inc.**, Adhesives Dept., Bridgeport 2, Conn.

For more details circle NED-810 M8 on enclosed inquiry slip

PAPER LABELING TAPE vinyl coated, resists 275° F

Pressure sensitive Time Tape is a vinyl-coated paper tape available in roll form for labeling. It will stick to most objects, can be torn off easily, can be written on with pen or pencil, and is unaffected by temperatures up to 275° F. Being oil and waterproof and acid resistant, tape can be used to label sterilizing, autoclaving, or refrigeration vials or vessels. It is offered in white, yellow, red, green, and blue colors and in ½, ¾, 1, 1½, and 2-in. widths. Made by **Professional Tape Co.**, 355 Burlington Ave., Riverside, Ill.

For more details circle NED-811 M8 on enclosed inquiry slip

DEGREASING COMPOUND loosens carbon, grease, tar, sludge

By adding 1 qt of water to 5 oz of concentrated powder contained in each 1-qt Pow-A-Kit, a pleasant-smelling decarbonizing and degreasing compound is made. It loosens carbon, grease, tar, gum, and sludge from filters, gears, controls, tools, electrodes, and other small parts. The solution will not harm metal, plastic, or rubber materials; is nonflammable and noncorrosive; and will not harm the user's hands. Parts are immersed in the solution until foreign matter is loosened, then are rinsed with water. Kit is available in 1-qt size with dipping basket and combination kit which includes 1-qt size unit with dipping basket and an extra 5-oz refill can. Bulk quantities are also offered. Made by **Stewart-Hall Chemical Co.**, Box 66 T-104, Fleetwood Station, Mt. Vernon, N. Y.

For more details circle NED-812 M8 on enclosed inquiry slip

EASTERN CENTRIFUGAL JOB-RATED PUMPS

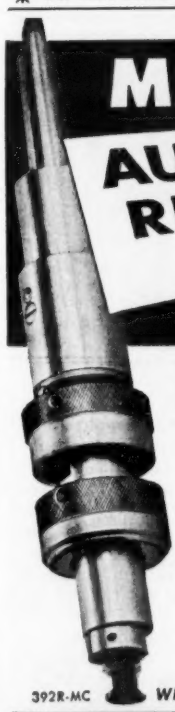
Original equipment manufacturers have chosen the Eastern D-11 Centrifugal Pump for 24,897 successful installations. With eighteen pounds of compact design (9¾" x 4⅝"), this close-coupled, single-stage centrifugal pump with induction type motor provides an ideal job rating for many installations.

The D-11 and other Eastern Centrifugal Pumps are available in 18-8 Type 303 and Type 316 Stainless Steel, Monel, Hastelloy "C", Cast Iron and Bronze. They range from ⅛th to ¾ H.P. with capacities up to 70 G.P.M., pressures to 65 P.S.I.

SEND FOR BULLETIN 120-R

Eastern INDUSTRIES, INC.
100 SKIFF ST., HAMDEN, 14, CONN.

For more details circle NED-813 M8 on enclosed inquiry slip



MAXWELL AUTOMATIC RECESSING TOOLS
REDUCE INTERNAL FORMING COSTS

These fully automatic, quickly adjustable tools save time, and cut costs on precision grooving, undercutting, inaccessible spot facing, chamfering, back facing and necking!

Maxwell Type JF Automatic Recessing Tools operate on the principle of an eccentric cutter holder actuated on its own axis. This is accomplished by the unique Maxwell Helical Gear and Diagonal Toothed Rack Mechanism.

They are used with jig or fixture on automatic or manual feed machines. Long-life circular form cutters, or tool bit holders with tool bits may be used. Location and diameter of recess are individually controlled by stop collars, adjustable to within ±0.001-inch. Five sizes available to pilot into 1" to 2¼" bushings. Furnished with shank to suit.

392R-MC *WRITE TODAY FOR BULLETIN NO. JF*

THE MAXWELL COMPANY
493 E. 5th Ave., Ashtabula, Ohio

For more details circle NED-814 M8 on enclosed inquiry slip

Plastics EXTRUSIONS by CONNEAUT

The Conneaut Rubber And Plastics Company is equipped to handle your requirements for almost any cross section in extruded Polyethylene and Vinyls. Where needed, we formulate special compounds in our own laboratories to meet your special applications. Complete die-making facilities in our own plant enable us to obtain extremely close tolerances . . . meet specifications exactly. Send us your blue prints for our quotations . . . or your problem for analysis and recommendations.

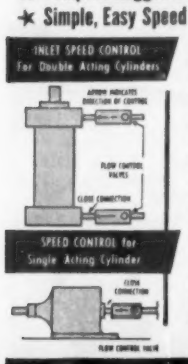
SEND FOR FREE, ILLUSTRATED FOLDER

Contains complete details on Conneaut's custom service on plastics compounding and extruding. 102-D

THE CONNEAUT RUBBER AND PLASTICS COMPANY
CONNEAUT, OHIO

For more details circle NED-815 M8 on enclosed inquiry slip

★ Accurate, Constant Cylinder Speed Control
★ Compact Rugged Design
★ Simple, Easy Speed Selection ★ For Air, Oil or Water Applications



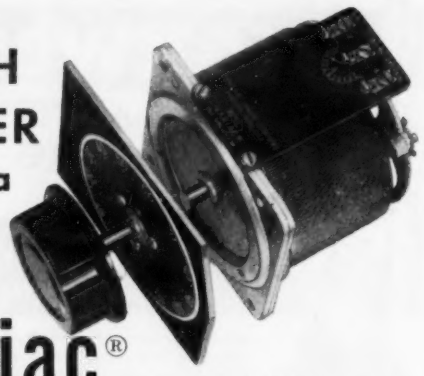
Pneu-Trol Speed Control Valves, are widely used in hundreds of control applications because they combine in a short, compact body, a tapered fine thread needle for extremely accurate air or oil flow control and a floating retro ball check, which permits full flow in the opposite direction. Retro ball floats in most sensitive position to its seat, requiring only a slight differential pressure to fully open or close it.

Needle design permits maximum flow capacity in the controlled direction. Metal to metal needle and ball seats insure long trouble-free service. Simple, practical "O" gland structure eliminates troublesome leaking. Valve bodies machined from hex brass or aluminum for 2000 psi working pressures; steel and stainless steel for 5000 psi. Made in 5 female pipe sizes—⅛" to ¾". ATTRACTIVE PRICES . . . IMMEDIATE DELIVERY.

Write for illustrated circular and prices.

Pneu-Trol DEVICES, INC.
2929 GRANT STREET • BELLWOOD (CHICAGO SUBURB) ILLINOIS
▲ For more details circle NED-816 M8 on enclosed inquiry slip ▲

HIGH POWER from a Little



Variac®

The Type W5L VARIAC auto-transformer is designed for many applications in which output voltages not in excess of line are all that are needed. Through modifications of the popular Type W5 units, the power rating of the Type W5L is increased to 1265 va. As with all VARIACS the output voltage is continuously adjustable from zero. Other VARIAC features included are Duratrak brush construction for extra-long life . . . excellent regulation . . . low losses . . . linear output. The Type W5L VARIAC is moderately priced at $17.50.

Write for the Variac Bulletin for Complete Data

GENERAL RADIO Company
275 Massachusetts Avenue, Cambridge 39, Massachusetts, U. S. A.

Broad Avenue at Linden, Ridgefield, N J NEW YORK AREA 1000 N Seward St. LOS ANGELES 38
8055 13th St Silver Spring, Md. WASHINGTON, D. C. 1150 York Road, Abington, Pa. PHILADELPHIA
1182 Los Altos Ave., Los Altos Calif SAN FRANCISCO 6605 W North Ave., Oak Park, Ill CHICAGO
In CANADA: 99 Floral Parkway TORONTO 15

▲ For more details circle NED-817 M8 on enclosed inquiry slip ▲

PROTECT LIVES . . .
Guard Against Property Damage

M&M RAIL CLAMPS

For car stops, on loading platforms, temporary sidings, railroad ferries, under tipples, for cars on grades and traveling cranes.

Used and recommended by leading Steel Companies, Manufacturing Plants, Mines, Grain Elevators, Cement Plants and Quarries.

WRITE FOR BULLETIN NO. 34

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. Fourth Street, Philadelphia 33, Pa.
▲ For more details circle NED-818 M8 on enclosed inquiry slip ▲

New Literature & Catalogs

Transistor Fundamentals & Uses

Radio Corp. of America—48-page Booklet No. 4T37 "Transistor Fundamentals and Applications" contains basic information on transistor theory and circuit applications to help technicians and engineers understand these semiconductor devices. It covers transistor physics, p-n-p and n-p-n junction transistors, point-contact transistors, transistor amplifiers, methods of coupling, gain controls, power amplifiers, oscillator circuits, power supplies, transistor components, and servicing transistor circuits.

▲ For more details circle NED-819 M8 on enclosed inquiry slip ▲

Hose & Duct for Dust Control

Flexaust Co.—Construction information, specifications, and prices relative to Flexaust hose and Portovent duct for use in dust control are presented in 4-page Bulletin 82. Supplementing the bulletin are eleven loose-leaf photos which show typical industrial installations of this hose and ducting.

▲ For more details circle NED-820 M8 on enclosed inquiry slip ▲

Flexible Cords & Portable Cables

Okonite Co.—64-page Manual 1108 which deals with line of mold-cured Okoprene (neoprene) sheathed cords and cables furnishes dimensional data, engineering information, and splicing and terminating instructions. These cable products are flexible even in coldest weather, resistant to excessive heat and abrasion, and in many applications, unaffected by oils and chemicals.

▲ For more details circle NED-821 M8 on enclosed inquiry slip ▲

Electric Heating Cable & Tape

Edwin L. Wiegand Co.—Chromalox Thermwire electric heating cable, tape, and band is used to prevent freezing in pipes, valves, and sprinkling systems; to melt snow and ice accumulations on roofs, canopies, and gutters; and to clear walks, driveways, steps, and weighing scales of snow and ice. Illustrated Bulletin 1000 serves as a quick guide to selection of proper equipment for winter applications.

▲ For more details circle NED-822 M8 on enclosed inquiry slip ▲

Custom Plastic Moldings

Rostone Corp.—Basic cold molded compositions as well as new hot molded formulations of Rosite plastic moldings for electrical applications are covered in 8-page Bulletin 200. Bulletin outlines the development of this stone-like molding compound, properties of which include basic resistance to heat, arc-quenching capability, nontracking characteristics, and high dimensional stability.

▲ For more details circle NED-823 M8 on enclosed inquiry slip ▲

Steel Strapping Equipment

A. J. Gerrard & Co.—Available literature consists of four individual data sheets which respectively describe oval steel strapping, Model 3001 and 3002 Autobinder automatic round steel strapping machines, Model 2701 and 2702 flat steel strapping machines, and the Dial-A-Band automatic band dispenser. First piece also features dispensers, strapping tools, and selective tensioning devices for oval steel strapping.

▲ For more details circle NED-824 M8 on enclosed inquiry slip ▲

Turntables

Macton Machinery Co.—Standard and special turntables ranging in size from 1-ft in diameter for small displays to the Paravane model for the display of automobiles are described in illustrated 4-page folder. They can be used for vehicle positioning, materials handling, product display, assembly, production, and other uses.

▲ For more details circle NED-825 M8 on enclosed inquiry slip ▲

Gage & Valve Selector

Jerguson Gage & Valve Co.—Selection of the correct size and type of liquid level gages and valves for any job is facilitated with a pocket-size slide selector, offered free of charge. It gives specifications, pressure-temperature graphs, illustrations of gage-valve combinations, and cross-sectional views.

▲ For more details circle NED-826 M8 on enclosed inquiry slip ▲

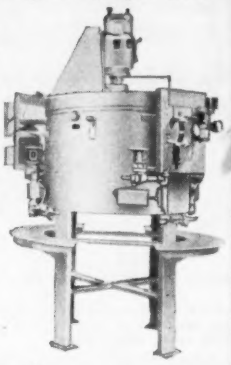
Electrical Tapes, Resins, Connectors

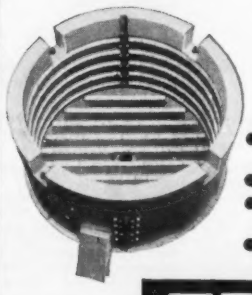
Minnesota Mining & Mfg. Co.—"Insulate, Hold, Protect with Scotch Electrical Products for Industry" is an illustrated brochure of 32 pages which details the various forms of tape, connectors, insulation putty, splicing resin, and other electrical products offered by this company. Selection and application data are given.

▲ For more details circle NED-827 M8 on enclosed inquiry slip ▲

KETTLES AND JACKETS
Faster Heating and Cooling . . . Longer Life

- 5 Gallon to 325 Gallon Capacity Kettles for Waxes, Oils, Resins, Salts, Asphalts.
- TRENT "Folded-and-Formed" Heating Elements in Metal Inner Liner.
- Complete Temperature Control to Prevent Overheating, Scorching, Hot Spotting.
- Jackets for Retorts, Reactors and Autoclaves.





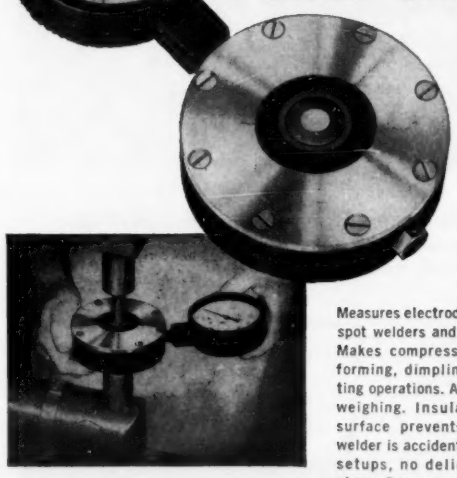
- High Temperature Uniformity to 2000°F.
- Compact, Space Saving Design.
- Low Thermal Inertia—High Dielectrical Strength (600V).
- Economical Installation and Maintenance.

WRITE FOR BULLETIN 72-TE

TRENT INC.
Electrically Heated Industrial Equipment
251 LEVERINGTON AVE., PHILADELPHIA 27, PA.
In Canada Supreme Power Supplies Limited, Toronto 14

▲ For more details circle NED-828 M8 on enclosed inquiry slip ▲

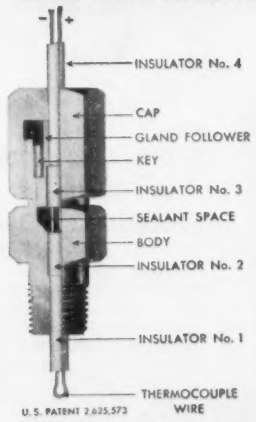
Webster DIRECT READING
HYDRAULIC TYPE
FORCE GAUGES



Measures electrode pressure on spot welders and roll welders. Makes compressive tests on forming, dimpling and upsetting operations. Also useful for weighing. Insulated contact surface prevents damage if welder is accidently fired. Easy setups, no delicate mechanisms, 5 ranges: 0-1000, 6000, 10,000, 20,000, 40,000 lbs. 3½" diameter gauge with accuracy to 1%. Reads directly in pounds—no conversion scales. Write for details.

Webster INSTRUMENT, INC.
Dept. N, 11856 Mississippi Ave., Los Angeles 25, California
▲ For more details circle NED-829 M8 on enclosed inquiry slip ▲

Fast Response
conax®
BARE WIRE THERMOCOUPLE GLANDS



provide the only simple, positive method for sealing two or more bare wires at pressures from full vacuum to 20,000 psi.

Low mass, unshielded, bare wire thermocouples give almost instantaneous response to temperature changes assuring greater accuracy of measurement and control.

- Temperature range—−300°F to +1850°F
- All stainless steel construction
- Complete range of sizes
- Available from stock

WRITE FOR CONAX DATA BOOK SHOWING COMPLETE LINE OF THERMOCOUPLE ASSEMBLIES AND PRESSURE SEALING GLANDS.

conax corporation
2326 Walden Ave., Buffalo 25, New York
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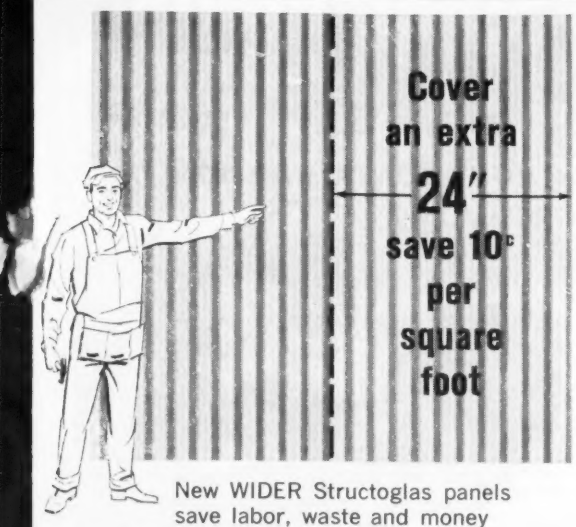

New WIDER Structoglas panels save labor, waste and money

Two new widths of Structoglas reinforced fiber glass panels give you more installed coverage area per dollar than any other panel (51½" for skylights, 50" for glazing, both covering 48"). Wider Structoglas has fewer overlaps, needs less fasteners, takes less time to install. You actually save 10c per square foot when you install 51½" Structoglas instead of ordinary 27½" panels.

Write for specs and prices today! Structoglas Division of International Molded Plastics, Inc. Dept. NE12 Cleveland 9, Ohio

structoglas

5810

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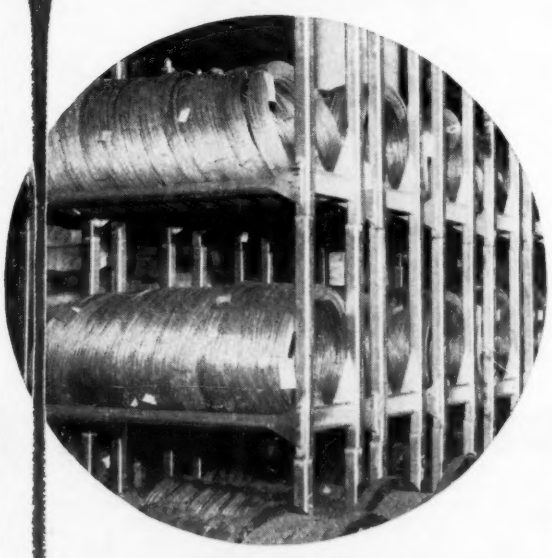
put your upper space to work!

get your materials off the ground with EMI RACKS



you can stack or ship anything in any industry on EMI RACKS

COMPLETE METAL WORKING FACILITIES INCLUDING . . .

TUBING—Square, Round, Rectangular and special shapes

WIRE MESH—All Gages

SPECIAL FABRICATIONS

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for complete catalog!

EQUIPMENT MFG. INC.

21566 HOOVER ROAD
DETROIT 5, MICHIGAN

▲ For more details circle **NED-832 M8** on enclosed inquiry slip ▲

New Processes & Materials

LIQUID CLEANING AGENT penetrates hydro-carbon grease film

Complete penetration and breakdown of soil-attracting hydro - carbon grease film is achieved by emulsifying action of All-Kleen Supercleaner, a multipurpose cleaning agent for use on heavily soiled floors. Emulsified dirt and soil are chemically loosened and can be flushed or rinsed away without rubbing. The concentrate contains no volatile materials or unpleasant odor, is harmless to skin and clothing, and will not damage any surface normally cleaned with soap and water. It can be applied in desired concentrations by mopping, wiping, spraying, or in automatic floor machines. Diluting it as much as 1 part to 100 parts of water will not destroy its effectiveness. Test samples are available free from **Hadco Corp.**, 2705 Detroit Ave., Cleveland 13, Ohio.

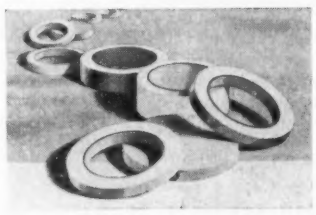
▲ For more details circle **NED-833 M8** on enclosed inquiry slip ▲

DRAWING REPRODUCTION PAPER one-step direct-positive type

Direct positive reproduction of engineering drawings in one step is possible with Photo-Positive photosensitive reproduction paper. It has a 100 per cent rag content base stock for high wet strength, dimensional stability, and uniform transparency. Material is wet-erasable without bleeding or feathering when new pencil or ink lines are drawn in over the erased area. Extra-thin and transparentized vellum grades are supplied in rolls up to 42 in. wide which fit all standard reproduction machines, or in cut sheets of any dimension up to 42 in. wide. Direct positive reproduction from the original results when it is exposed in any contact printer with a high intensity orange or yellow light source. Filters for other light sources are available. Made by **Peerless Photo Products, Inc.**, Dept. NED, Shoreham, L. I., N. Y.

▲ For more details circle **NED-834 M8** on enclosed inquiry slip ▲

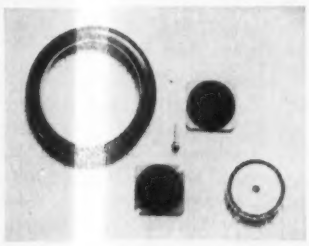
TEFLON FILM TAPE is stable under extreme conditions



Superior bondability and stability under extreme conditions are characteristic of Fluorolin 600, a Teflon film tape with pressure - sensitive silicone adhesive. Tape is made by fusing together layer upon layer of submicron size particles of Teflon to build up film thicknesses from 0.00025 to 0.005 in. By virtue of this multiple dipping process, film is free from pinholes and blemishes and has high mechanical, chemical, and electrical properties. Tape is used in winding coils, bundling wires, wrapping lead wires, insulating motor slots, and other aircraft, electrical, or electronic applications. Made by **Joclin Mfg. Co.**, 23 Lufbery Ave., Wallingford, Conn.

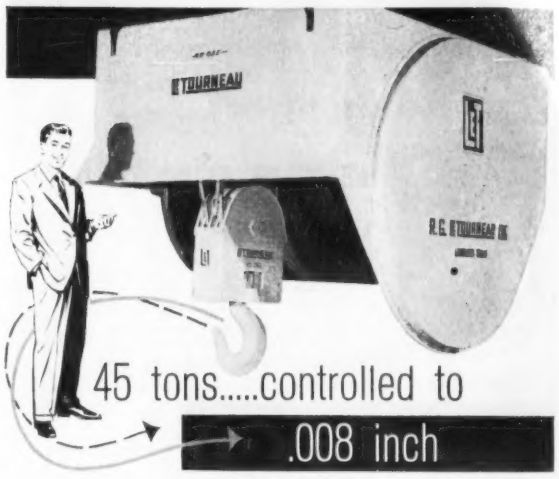
▲ For more details circle **NED-835 M8** on enclosed inquiry slip ▲

BONDED RUBBER-METAL PARTS made to close tolerance, fine finish



Permadizing system for bonding Hycar American rubber to metal achieves composite parts that are free of flash, precise in dimension, and have optically flat surfaces. Process can be used with almost any metal, and dimensions can be held as closely as with all-metal parts. Rubber surfaces as fine as 5 microfinish are produced. Rubber resists fuels, oils, and other fluids and has a temperature range from −65 to 250° F. Typical application of Permadizing parts is a valve poppet to seal off air pressure on the relief valve of an aircraft hydraulic system regulator. Parts are made by **Stillman Rubber Co.**, 5811 Marilyn Ave., Culver City, Calif.

▲ For more details circle **NED-836 M8** on enclosed inquiry slip ▲



LeTourneau ELECTRIC HOISTS

LeTourneau Hoists offer such high precision control that loads can be raised or lowered in increments of .008". Cuts time lost in adjusting loads up and down. Available in free-rolling, hand-geared or motorized trolley and deck, hook and lug mountings. Lightweight, low-headroom design . . . *from 3 to 45 tons and up!*

R.G. LETOURNEAU INC

INDUSTRIAL EQUIPMENT DIVISION
25612 S. MacArthur • Longview, Texas

Write for free descriptive literature today. F-123

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Transferring Heat?

TRY WOLVERINE TRUFIN®

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WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17266 Southfield Road
Allen Park, Michigan

Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

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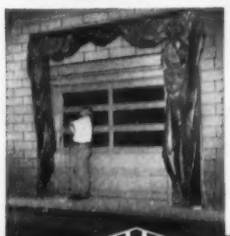
COMPLETE DOCK PROTECTION IN SECONDS — ONE MAN OPERATION



Just think . . . in seconds you can give trucks at your dock complete protection on the coldest days . . . save personnel from winter colds and accidents . . . protect products from weather damage and freezing. Rugged, heavy duty, spring-loaded steel frame needs no maintenance . . . UL approved fabrics are fire, water, mildew-resistant.

WRITE for complete details and prices.

FROMMELT INDUSTRIES
DUBUQUE, IOWA

The Name To Remember For Approved Safety Products

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seals tight...

EXPANDS under heat

KEY GRAPHITE PASTE seals oil, gas, and high-pressure pipe joints tighter because it expands under heat — forces its way into every crevice.

Easy to Apply — goes on threaded or gasket joints with a brush — can be thinned with water.

Easy to Break — never freezes joints — protects threads.

Safe — for use with flammable liquids (Listed by Underwriters Laboratories)

Lubricates — speeds assembly — won't seize or cross-thread.

Order KEY Graphite Paste from your supplier or send for FREE SAMPLE.

W-K-M DIVISION OF ACF INDUSTRIES INCORPORATED
Department Z-12
P.O. Box 2117, Houston, Texas

KP-5802

For more details circle NED-840 M8 on enclosed inquiry slip

FREE 28 PAGE CABLE TRAY CATALOG

Completely illustrated with full data and specifications on:
GLOBETRAY . . . the Superior Ladder type tray.
CABLE-STRUT . . . the Superior Basket type tray.
(Interchangeable at any point in the system.)
A must for architects, consulting engineers, and designers interested in trays for the support of cables, wiring and tubing used for power and communication instrumentation, where speedier installation is desired. A full line of accessories is available.
Write for your copy TODAY.

PRODUCTS DIVISION THE GLOBE CO.
4002 S. Princeton Ave., Chicago 9, Illinois

For more details circle NED-841 M8 on enclosed inquiry slip

WORM GEARS

NEW BULLETIN CD-700-C free to design engineers

Details of hundreds of matched sets of double-enveloping worm gears. Capacities from fractional to over 1600 hp. Drawings, charts and photos illustrate 16-page booklet.

CONE-DRIVE GEARS
DIVISION MICHIGAN TOOL COMPANY
7171 E. McNichols Rd. • Detroit 12, Michigan

For more details circle NED-842 M8 on enclosed inquiry slip

New Literature & Catalogs

Chucks & Drill Attachments

Supreme Products Corp.—Mechanical features and specifications for each of 59 Supreme industrial chucks for power drills, drill presses, and other equipment are presented in 14-page catalog. Other tools covered are chuck keys, arbors, chuck repair parts, and a line of portable drill attachments, including the Versamatic reversible speed-reduction unit and the Push-Pull Tapper.

For more details circle NED-843 M8 on enclosed inquiry slip

Material Storage Racks

Chicago Tramrail Corp.—Wide variety of storage racks for industrial materials is illustrated and described in 12-page Bulletin R-400. Many application drawings, photographs, and diagrams are included.

For more details circle NED-844 M8 on enclosed inquiry slip

How To Use Radial Saws

Rockwell Mfg. Co., Delta Power Tool Div.—Explanations of 42 different woodworking operations that can be performed on a Delta Radial saw are offered in 12-page tabloid. It describes the portable 10-in. and the new Super 900 9-in. models. Operations such as cross-cutting, ripping, dadoing, and tongue and grooving are pictorially detailed.

For more details circle NED-845 M8 on enclosed inquiry slip

Synchronous Motors

Electric Indicator Co.—Revised Catalog EI-4 on Elinco line of synchronous motors places emphasis on hysteresis and salient pole induction motors. Over 200 representative fractional horsepower motors are reviewed. Detailed electrical, physical, and performance characteristics for each type are given. Single and multispeed types are offered in various voltage, frequency, and power ratings.

For more details circle NED-846 M8 on enclosed inquiry slip

Epoxy Data

Biwax Corp.—"Epoxy Compounds" is title of tabular guide to 20 compounds showing their pot life, curing cycles, weight losses and gains, shrinkage, thermal shock, and special properties and applications.

For more details circle NED-847 M8 on enclosed inquiry slip

Coatings for Metal

Bee Chemical Co.—36-page guide book "Coatings" discusses coatings for use on metal, plastics, glass, and wood by spraying, screening, and roller processes. Data are included on standard colors, including metallics, bronzeless gold, and other special effects. Procedures, applications, and specifying guidance are given.

For more details circle NED-848 M8 on enclosed inquiry slip

Process Instruments

Fischer & Porter Co.—Process instruments which are available for quick shipment are subject of 52-page Catalog 2. It describes and prices indicators, transmitters, recorders, and controllers for flow, pressure, temperature, density, viscosity, and consistence. Standard instruments are warehoused at strategic locations throughout the country.

For more details circle NED-849 M8 on enclosed inquiry slip

Control Valves

Conoflow Corp.—Details of the construction and operating characteristics of the Series LB control valve for pressures to 600 psi and in 1 to 4-in. sizes are presented in 12-page Bulletin LB-3. This valve combines a single-seated valve body and a cylinder actuator to provide exact control of flow.

For more details circle NED-850 M8 on enclosed inquiry slip

Skylights for Plants

Marco Co.—Up-to-date information on the complete line of Marcolite aluminum and reinforced glass fiber skylight products is contained in 12-page A.I.A. File 12-j. Stationary, ventilating, fire vent, scuttle, and other types are shown, and complete application information is given.

For more details circle NED-851 M8 on enclosed inquiry slip

Custom Rubber Parts

Western Rubber Co.—Production facilities of this company as well as typical molded and lathe-cut custom designed rubber parts are described in 6-page illustrated folder. Company can produce items such as insulators, seals, gaskets, caps, bumpers, grommets, and handles of practically any type of natural or synthetic rubber.

For more details circle NED-852 M8 on enclosed inquiry slip

PUMP LIQUIDS GASES SLURRIES

WITHOUT CONTAMINATION OR CORROSION

Wavelike Motion of Steel Fingers Forces Material Through Tubing

0.2 cc per minute to 4.5 g.p.m.
Prices $60.00 to $550.00
depending on size and accessories

Write for Descriptive Literature

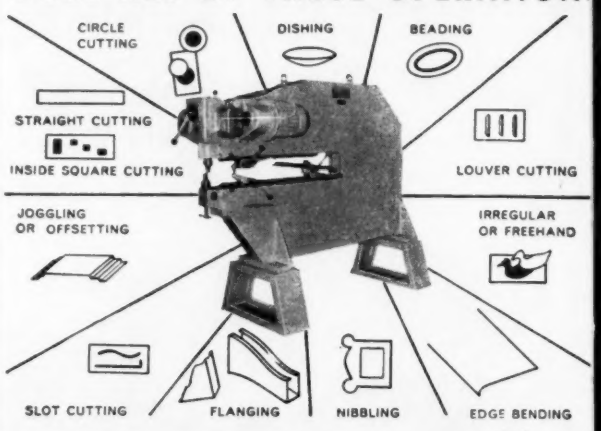
SIGMAMOTOR, INC.
33 North Main St. • Middleport, N.Y.

For more details circle NED-853 M8 on enclosed inquiry slip

A Complete Sheet Metal Shop in One Machine

PULLMAX

DOES ALL OF THESE OPERATIONS



★ CUTS MILD STEEL UP TO 11/32"

The one machine that's sure to save time, labor and material when you work sheet or plate. Eliminates expensive die costs—easy to operate. 7 sizes to choose from.

16 m.m. Sound Film available

Write for a demonstration right in your plant.

Write for free catalog on Metalworking Ideas.

AMERICAN PULLMAX CO., INC.
2457 N. Sheffield Ave., Chicago 14, Illinois
"See us in Booth 1516, Maintenance Show, Cleveland, Ohio, Jan. 26-29"

For more details circle NED-854 M8 on enclosed inquiry slip

LIGHTWEIGHT Handy Man GOES ANYWHERE
HYTROL MODEL R ALUMINUM CONVEYOR

Folds in half for easy moving

Sizes from 10 to 21 feet, 12" belt, reversible, truss-designed for heavy loads. Accessories: Wheel and floor stands, power feeders, roller mounting, troughing attachment.

Write for your Hytrol Catalog

HYTROL Conveyor Co. INC.
1965 S. 54th Street Milwaukee 19, Wis.

For more details circle NED-855 M8 on enclosed inquiry slip

FASTENER FIT PROBLEM?

New booklet tells how SPS Thread Metrology Labs can help you solve it

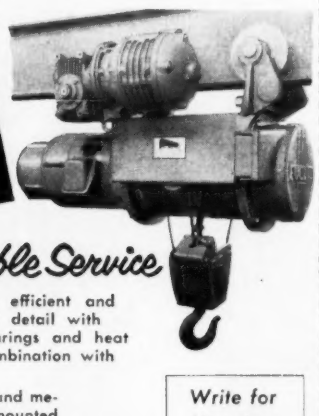
Are threaded-fastener assembly problems causing you production losses? Do you have a particularly difficult fit and strength problem stemming from dimensional factors? Would you like help in setting up a reliable inspection gaging system for threaded parts? Then you will be interested in the services of SPS's new coast-to-coast network of Screw Thread Metrology Laboratories, described in detail in the 24-page booklet offered here (Form 2369). STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

SPS Jenkintown • Pennsylvania

Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co. • National Machine Products Co. • Nutt-Shel Co. • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

▲ For more details circle NED-856 M8 on enclosed inquiry slip ▲

Series H-Capacities from 2000 to 50,000 Pounds



EUCLID HOISTS

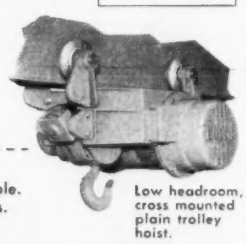
for Dependable Service

These hoists are highly efficient and strictly modern in every detail with oversize anti-friction bearings and heat treated steel parts in combination with a welded frame.

The planetary gearing and mechanical load brake are mounted in oil tight housings. The hoist gearing is assembled in the hoist drum.

This design produces an unusually compact, rugged and accessible hoist readily adapted to various installations and types of control.

Write for Literature



Low headroom, cross mounted plain trolley hoist.

Various other standard and special heavy duty hoists available. Write regarding your requirements.

THE EUCLID CRANE & HOIST COMPANY
1362 CHARDON ROAD • CLEVELAND 17, OHIO

▲ For more details circle NED-857 M8 on enclosed inquiry slip ▲

that **foot switch** you need has **already** been designed!

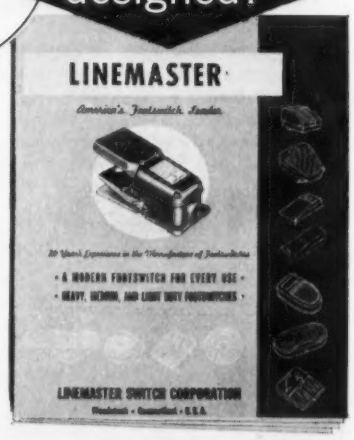
THE COMPACT

Small-Light Weight Durable with a variety of circuits

Don't hold up production schedules for special-project designing.

We have what you need—right now. More than 75 different models in stock. See for yourself.

SEND FOR COMPLETE CATALOG TODAY!

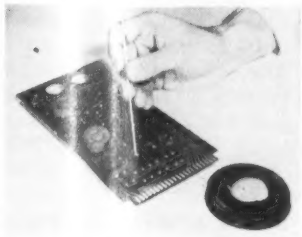


LINEMASTER SWITCH CORP.
424 Woodstock Terrace, Woodstock, Connecticut

▲ For more details circle NED-858 M8 on enclosed inquiry slip ▲

New Processes & Materials

CONDUCTIVE CEMENT repairs electrical components



Volume resistivity of Hysol 6250 conductive cement is measured at 0.01 ohm-cm at 25° C. Based on epoxy resins and 100 per cent solids, it offers high bond strengths to most materials. It can be used for repair of printed circuits and for bonding of electrical components where soldering cannot be tolerated. Compound cures in 24 hr at room temperature, or in 2 hr at 140° F. Made by **Houghton Laboratories, Inc.**, 333 Bush St., Olean, N. Y.

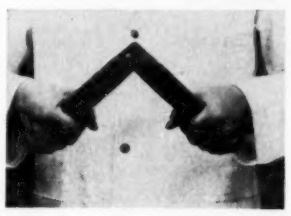
▲ For more details circle NED-859 M8 on enclosed inquiry slip ▲

SARAN ROPE resists practically all liquids

Operations where chemical action would quickly deteriorate regular fiber rope have little or no effect on liquid and corrosive-resistant Saran rope. Saran is a Dow Chemical Co. extruded thermoplastic material. It resists water, chemicals, solvents, acids, and common alkalies. Saran rope is nonabsorbent and noninflammable when exposed to high heats. It has great resistance to abrasion and is unaffected by age or weathering. About 14 per cent heavier than Manila rope, its strength is about 30 per cent less than that of Manila rope. Saran rope is offered in 1/4, 5/16, 3/8, 7/16, 1/2, and 5/8 in. diameters. Lengths up to 2400 ft or longer are obtainable. Made by **Columbian Rope Co.**, 309 Genesee St., Auburn, N. Y.

▲ For more details circle NED-860 M8 on enclosed inquiry slip ▲

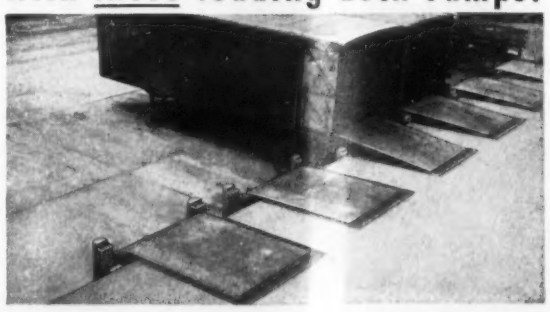
FLEXIBLE POLYETHYLENE PIPE resists cracking under stress folds



Remarkable resistance to stress - cracking is combined with chemical resistance comparable to that of polyvinyl chloride in Carlon H-Mol flexible polyethylene pipe. It will handle highly corrosive fluids at low pressures under operating temperatures as high as 150° F. Diameters from 3 to 6 in. are available in continuous lengths folded up in units of 500 lb total weight. Thus, a 4-in. pipe could be obtained in about 400-ft lengths. Pipe is easily unfolded by applying steam to the bends. Coils in sizes of 1/2 through 2 in. are also available, as well as 30-ft lengths in 3, 4, 6, and 8-in. sizes. Made by **Carlon Products Corp.**, 10225 Meech Ave., Cleveland 5, Ohio.

▲ For more details circle NED-861 M8 on enclosed inquiry slip ▲

***NO OPERATING COST* with *these* loading dock ramps!**



RITE-HITE Full Automatic RAMPS are *completely truck actuated*... save manpower for other work

Consider, too, these additional Rite-Hite advantages:

*Precision, mechanical counterbalance—no starters, motors, pumps, cylinders, piping, wiring, gears, cables to cause trouble.
*Little or no maintenance—heat, cold, snow, water, ice do not effect Rite-Hite's smooth operation.
*Maximum safety—Rite-Hite's ramp platform can never drop because of a power failure.
*Simplest to install—shipped completely assembled for easy installation in simple dock opening.

10-TON CAPACITY

You'll want full details. Write Dept. N-128

RITE-HITE DIVISION

LOOMIS MACHINE COMPANY
133 EAST FOURTH STREET, CLARE, MICHIGAN

▲ For more details circle NED-862 M8 on enclosed inquiry slip ▲

These FREE reports . . . give YOU

PROOF of SAVINGS

when Barry machinery mounts are used in machine installation or moving.

SAVED $54.00 per machine installation . . . American Type Founders
SAVED 90% time and labor in moving machines . . . Johnson and Johnson
SAVED 3 Days production time for entire machine shop . . . Wyman-Gordon
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SAVED $1500 plus production time and labor cost . . . Die Supply Div., E. W. Bliss Co.

The detailed information in these revealing reports furnished by dollar-conscious American manufacturers can **save money for you.**

WRITE FOR YOUR FREE COPIES.

BARRY CONTROLS inc.
752 PLEASANT STREET, WATERTOWN 72, MASSACHUSETTS

▲ For more details circle NED-863 M8 on enclosed inquiry slip ▲

Do you screen, sift or grade dry materials?

Get the facts on BAR-NUN *Rotary* SIFTERS

Features include: Rapid, accurate separations, achieved by complete rotary motion . . . big capacity in limited floor space . . . dust-tight, totally enclosed construction . . . easy cleaning . . . optional stainless steel product zone . . . all-mechanical heavy-duty construction. Available with from 2 to 78 square feet of screen area—for single or multiple separations of dry materials, as fine as 325 mesh. Here's real screening efficiency, economy, durability.

Details in 6-page Bulletin 503

FEEDING · MIXING · SIFTING · GRINDING · WEIGHING · PACKING and PACKAGING EQUIPMENT FOR THE PROCESS INDUSTRIES

B. F. GUMP CO.
Engineers and Manufacturers since 1872
1336 S. Cicero Avenue, Chicago 50, Illinois

▲ For more details circle NED-864 M8 on enclosed inquiry slip ▲

NEW Rockwood "316" Stainless Steel Ball Valve

• *Resists Wear Longer . . . Stays Leakproof*

PLUS The Outstanding Features of Other Rockwood Ball Valves — easy operation, low pressure sealing, stem repacking without removal from the line. Full, round flow every time.

PLUS Variations — many different seat types. Available with remote air-operation in wanted sizes 3/8" to 2". Write for complete specifications in the folder NEW ROCKWOOD "316" STAINLESS STEEL BALL VALVE.

ROCKWOOD SPRINKLER COMPANY
1186 Harlow Street, Worcester 5, Mass.

▲ For more details circle NED-865 M8 on enclosed inquiry slip ▲

Here's information you'll want on STANDARD precision timers

Accurate, reliable, versatile Elapsed Time Indicators. Synchronous motor drive, manual or electric zero reset. Electric clutch controlled by manual or automatic switch or output of electronic tubes. Units available for flush panel mounting or portable use.

Model	Scale Divisions	Totalizes	Accuracy
S-100	1/5 sec.	6000 sec.	±.1 sec.
S-60	1/5 sec.	60 min.	±.1 sec.
SM-60	1/100 min.	60 min.	±.002 min.
S-10	1/10 sec.	1000 sec.	±.02 sec.
S-6	1/1000 min.	10 min.	±.0002 min
S-1	1/100 sec.	60 sec.	±.01 sec.
MST	1/1000 sec.	.360 sec.	±.001 sec.
MST-500	1/1000 sec.	30 sec.	±.002 sec.

REQUEST BULLETIN NO. 198

THE STANDARD ELECTRIC TIME COMPANY
89 LOGAN STREET • SPRINGFIELD, MASSACHUSETTS

▲ For more details circle NED-866 M8 on enclosed inquiry slip ▲

The NEWEST and FINEST... ... in precision soldering tools.

- Resistance Principle
- Dual Metal Alloy Tips
- No Ground Circuit
- Handpiece Weighs Ounce
- Sound Engineering
- Quality Plus
- Gap Adjustable
- Heats at tips only
- Dramatically Fast
- Soldering No. 20 Wire in 1.9 Seconds
- Strictly a High Production Industrial Tool
- Cold, Porous, Soldered Joints Are Eliminated
- Increases Production 10 to 50%
- Tweezer Effect Without Fatigue
- Three Heats: 15-50-100 Watts

Write For.... ....Bulletin 105M Today!

Wassco Electric Products Corp.
2032 2nd. AVE. SO., ST. PETERSBURG 12, FLORIDA

▲ For more details circle NED-867 M8 on enclosed inquiry slip ▲

NEW J&J VERTILOK

To provide greater locking strength, the J & J "Vertilok" side brake features a vertical cam action and a specially formed brake shoe which contacts the maximum tire tread area. A slight press of the toe and the wheel is securely locked . . . or completely released. Provision is made for adjustment of the braking action to compensate for wheel or tire wear. Simplicity of design and rugged construction assure long, trouble-free life.

SIDE BRAKE

for Medium Duty Plate Casters

Sold Through Quality Dealers

Jarvis AND Jarvis, Inc. PALMER, MASSACHUSETTS

Sales Representatives in Leading Cities Throughout the Country

IN CANADA: Jarvis & Jarvis of Canada, 1744 William St., Montreal, Que.

Suitable for all 4" to 6" rubber wheels, with hard or soft tread; steel disc replaceable tread wheels, 4", 5" and 6" diameter; also medium casters with standard 4" x 4" top plate.

▲ For more details circle NED-868 M8 on enclosed inquiry slip ▲

New Literature & Catalogs

Component Dry-Type Transformers

General Electric Co.—24-page "Designers and Buyers Guide" for component dry-type transformers is a complete reference for selecting small power and control, general-purpose, and special-purpose transformers. The small power and control units are rated 0.025 through 5 kva, whereas general-purpose units are rated 3 through 500 kva. Typical ratings, prices, and detailed application data are given.

▲ For more details circle NED-869 M8 on enclosed inquiry slip ▲

Barrel & Wet Blast Finishing

Wheelabrator Corp., Techline Div.—First issue of "Techline Finishing Progress" is devoted to precision finishing by barrel and wet blasting methods, as well as applications of media, compounds, and abrasives for both methods. Vol. 1, No. 1 has pictures and details of the Techline Division, its products and personnel. Photos show examples of parts finished by both methods.

▲ For more details circle NED-870 M8 on enclosed inquiry slip ▲

Multiuse Axial Flow Fans

Borg-Warner Corp., Pesco Products Div.—High air displacement and pressure for cooling, heating, and ventilating are provided by line of axial flow fans described in 4-page Bulletin 5802. Specifications and design features of 27-v dc, 400 and 60-cycle ac, and special models are included.

▲ For more details circle NED-871 M8 on enclosed inquiry slip ▲

Supported-Wire Brushes

Osborn Mfg. Co.—Ty Tools, a series of wire brushes for power finishing, feature wire points resiliently supported in an elastomer. They are described and illustrated in an 8-page bulletin which has specifications for types with the same construction as various other Osborn brushes. Types for various machine operations are detailed.

▲ For more details circle NED-872 M8 on enclosed inquiry slip ▲

Drawn Aluminum Boxes & Covers

Zero Mfg. Co.—Over 11,000 standard deep drawn aluminum boxes and covers available from stock are covered in 20-page Catalog B. They range from $\frac{7}{8}$ x $1\frac{5}{8}$ in. with a height of 7/16 to 2 in. to $20\frac{1}{8}$ x $32\frac{1}{8}$ with a height of $2\frac{1}{8}$ to 10 in. Secondary operations which can be performed to make them into custom containers, housings, or cases are described.

▲ For more details circle NED-873 M8 on enclosed inquiry slip ▲

Ultrasonic Equipment Applications

Branson Ultrasonic Corp.—"Branson Ultrasonic News" is a new periodical devoted to industrial techniques and applications of "silent sound" for gaging, cleaning, and testing. A number of case histories is included and technical assistance on problems is offered. Section is also devoted to available literature. It will be sent regularly to those concerned with uses of ultrasonics.

▲ For more details circle NED-874 M8 on enclosed inquiry slip ▲

UL Label Marking Machines

Markem Machine Co., Special Products Div.—Direct marking of components, parts, and packages with the Underwriters' Laboratories manifest label is performed by eight Markem machines. Items of flat, round, and irregular nature can be marked. Machine specifications, features, and applications are covered in illustrated 8-page catalog.

▲ For more details circle NED-875 M8 on enclosed inquiry slip ▲

Rotary Hydraulic Pumps

Blackmer Pump Co.—Two basic methods for computing the suction and discharge conditions of a given pump installation are described in 28-page Bulletin 33 which contains hydraulic data for Blackmer rotary pumps. Factors involved in pump selection are outlined, and type of construction for handling various industrial liquids is covered in a table.

▲ For more details circle NED-876 M8 on enclosed inquiry slip ▲

Bellows Design

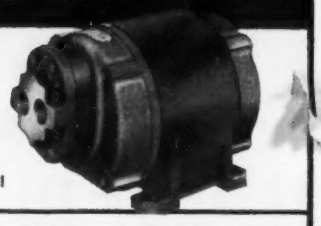
Basic design concepts of welded metal bellows are discussed in this bellows design manual, offered with a slide calculator. They permit the analytical design of bellows assemblies for use in various types of mechanisms. Slide calculator permits rapid approximation of spring rate, radial stress, bending stress, and other factors. Price is $1. Available only by writing directly to Belfab Corp., Daytona Beach, Fla.

▲ For more details circle NED-877 M8 on enclosed inquiry slip ▲

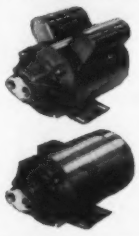
New Additions to ROPER T SERIES

CHOICE OF 192 MODELS

.3 to 55 GPM - to 400 PSI



COMPACT, INTEGRAL PUMP and MOTOR UNITS
For Hydraulic, Pressure Feed, Transfer Work



Compact, lightweight, "all-in-one" units with pump serving as end bell of motor. No coupling required — saves space. Furnished with open drip proof or totally enclosed standard NEMA motors, single or three phase. Send for Bulletin 31 today!

- COMPLETE, COMPACT UNITS
- LOW FIRST COST
- MOUNT IN ANY POSITION
- LONG LIFE SERVICE

ROPER HYDRAULICS, INC.
672 Blackhawk Park Ave.
Rockford, Illinois

ROPER ROTARY PUMPS

▲ For more details circle NED-878 M8 on enclosed inquiry slip ▲

Let us demonstrate — right in your plant or shop — how 'Budgit' Hoists can make your lifting problem disappear.

FREE DEMONSTRATION In YOUR Plant or Shop

Make us prove how 'Budgit' Hoist can solve YOUR lifting problem

Your local 'Budgit' Electric Hoist distributor now makes you this special offer:

He'll bring a 'Budgit' Hoist to the spot you name, hang it up, plug it in, and show you how 'Budgit' can make your lifting job fast, safe and effortless.

No obligation. Demonstration takes only minutes. All you need is a place to hang the Hoist and an electrical outlet AC or DC (or 12-volt battery).

The 'Budgit' Electric Hoist can handle any kind of load up to 2 tons, indoors or out. One-hand control leaves your hand free to guide the load. Hairline stops and starts let you "spot" your load gently within 1/100th of an inch. Two automatic brakes give complete safety.

CALL YOUR SHAW-BOX DISTRIBUTOR TODAY or write for your copy of bulletin 402 and 404. No obligation of course.

58A-1

'Budgit'® ELECTRIC HOISTS

MANNING, MAXWELL & MOORE, INC.
SHAW-BOX CRANE & HOIST DIVISION
400 West Broadway • Muskegon, Michigan

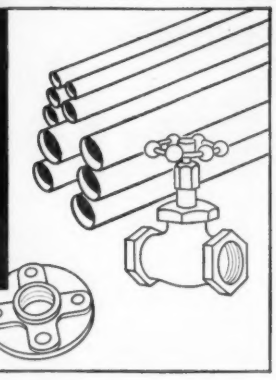
Builders of "SHAW-BOX" and 'LOAD LIFTER' Cranes, 'BUDGIT' and 'LOAD LIFTER' Hoists and other lifting specialties. Other Divisions produce 'ASHCROFT' Gauges, 'HANCOCK' Valves, 'CONSOLIDATED' Safety and Relief Valves, 'AMERICAN' and 'AMERICAN-MICROSEN' Industrial Instruments, and Aircraft Products.

In Canada: Manning, Maxwell & Moore of Canada, Ltd., Avenue Road, Galt, Ontario.

▲ For more details circle NED-879 M8 on enclosed inquiry slip ▲

Plastic Pipe

stocked for you at Whitehead Metal "Supermarkets"



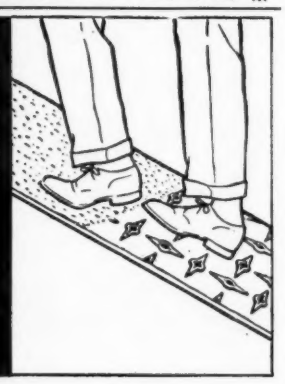
New applications for plastic pipe are being discovered every day. The advantages of this modern pipe are many—its resistance to corrosion and electrolytic actions, its light weight and comparatively low cost. Whitehead stocks a full line of flexible, rigid and semi-rigid types in all important commercial resins. Sizes range from ⅛" to 6" IPS. Fittings, cements, valves and accessories are available from stock. Whitehead's extensive plastic pipe know-how is at your disposal, too.

Write for detailed literature, mentioning if possible, the use you had in mind.

WHITEHEAD
METAL PRODUCTS COMPANY, INC.
303 WEST 10th STREET • NEW YORK 14, N. Y.
For more details circle NED-880 M8 on enclosed inquiry slip

ALUMINUM
Tread Plate

DIAMOND OR ABRASIVE
stocked for you at Whitehead Metal "Supermarkets"



Plant Safety Engineers are finding Aluminum Tread Plate the answer to flooring problems. Light in weight and corrosion resistant, there are two types available. The conventional diamond pattern is used for normal protection, and abrasive non-skid plate provides maximum gripping power under oily, wet or dry conditions.

Both plate types are available in 48" by 144" sheets in three thicknesses—0.125", 0.190" and 0.375". Write for the illustrated descriptive booklet, which gives additional information as well as installation suggestions.

WHITEHEAD
METAL PRODUCTS COMPANY, INC.
303 WEST 10th STREET • NEW YORK 14, N. Y.
For more details circle NED-881 M8 on enclosed inquiry slip

CORROSION RESISTANT
Fasteners

stocked for you at Whitehead Metal "Supermarkets"

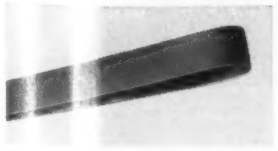
Monel? Inconel? Nickel? Aluminum? Brass? Bronze? Copper? Silver Bronze? Stainless Steel? The "special" fastener you need is probably **standard** at Whitehead.

Everything in fasteners from boat nails to tenter hooks is stocked at Whitehead. Why bother checking around for who makes some particular type of fastener? Call Whitehead and it's a safe bet it's already stocked for you. Flocks of fasteners like tacks, pins, rivets, nails, staples, bolts, hooks and clips. For a quick check for the right fastener, use Whitehead's handy wall chart, yours for the asking.

WHITEHEAD
METAL PRODUCTS COMPANY, INC.
303 WEST 10th STREET • NEW YORK 14, N. Y.
For more details circle NED-882 M8 on enclosed inquiry slip

New Processes & Materials

PLASTIC BELTING
made endless without fasteners



Made in all standard widths and thicknesses for a wide variety of applications, Dixylon industrial plastic belting can be made endless on the job in a few minutes without fasteners or sewing. The prestretched polyamide plastic product can be used for transmission, conveying, heavy duty drives, and high speed drives. It resists temperature, humidity, oils, and most acids, and has a nonslip running surface that eliminates any need for belt dressing. Only tools required for joining the belting are a hand or power skiver, a simple hand press, and Dixylon solution. Made by **R. & J. Dick Co.**, Totowa, N. J.

For more details circle NED-883 M8 on enclosed inquiry slip

DRY BONDING ADHESIVE
bond made when heat is applied

Heatweld dry bonding adhesive is applied to fabric, leather, paper, plastic, and other materials, then allowed to dry. A permanent bond is obtained when heat is applied, making it possible to adhere cemented materials to almost any surface. Bond may be made days, months, or years later. Adhesive is transparent, nonstaining, and resists washing and dry cleaning. It is supplied in liquid form for application by brush, roller, spray, or coating machine. Heating of the noninflammable product for application is not required. Made by **Adhesive Products Corp.**, 1660 Boone Ave., New York 60, N. Y.

For more details circle NED-884 M8 on enclosed inquiry slip

METALLIC TEXTURE FINISH
has three-dimensional appearance

One-coat Tri-Namic finish, offered in a wide range of brilliant colors, features a consistency of pattern that minimizes rejects. The metallic texture finish (shown, approximately full size) is easily applied by any spray method to all production metals, many plastics, wood, ceramics, and other materials. It has a three-dimensional appearance. Air or bake drying gives it durability, high corrosion resistance, top gloss, and color retention. Made by **Universal Paint & Varnish**, Inc., Northfield & Krick Roads, Bedford, Ohio.

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STAINLESS, MONEL AND ALUMINUM
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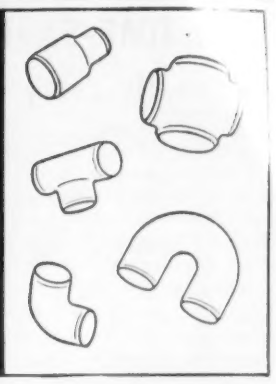

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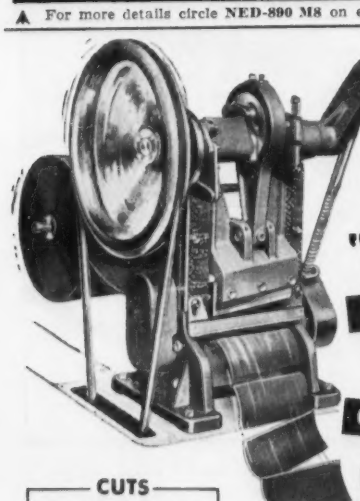

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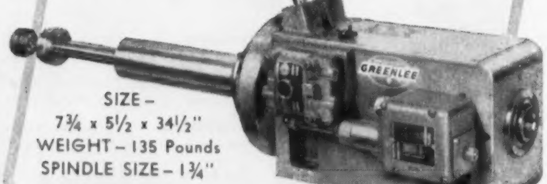

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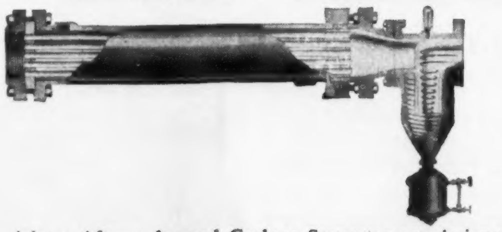

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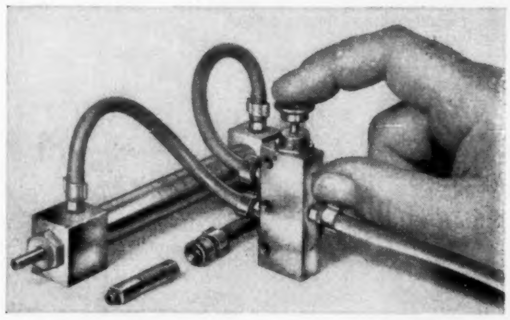

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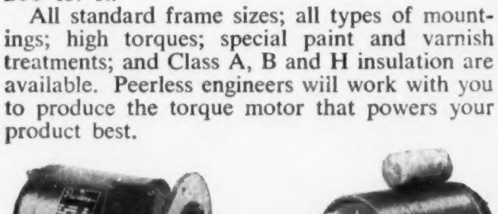

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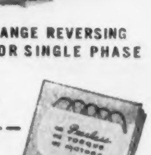

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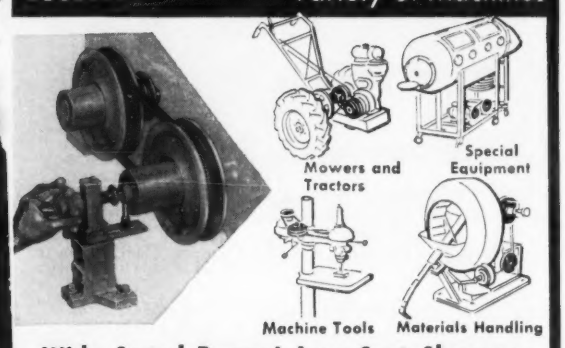

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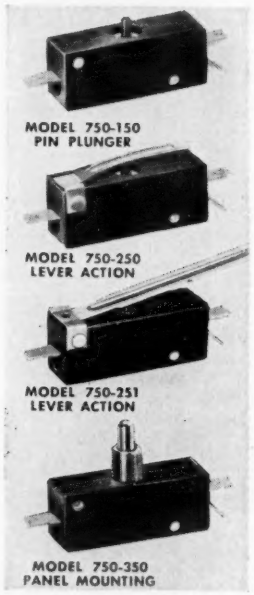

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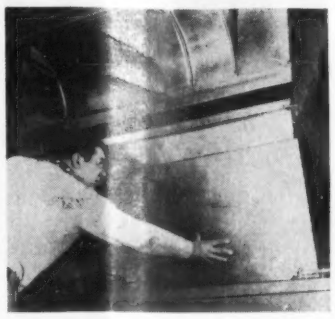

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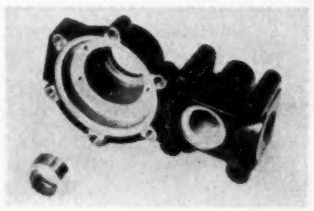
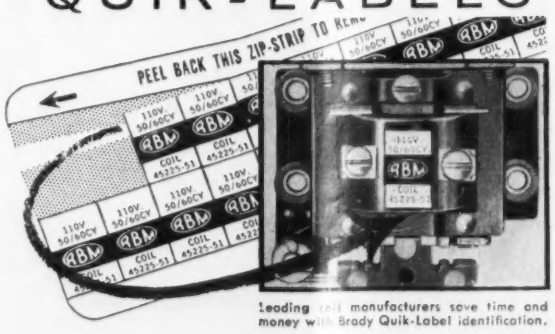
TEFLON VACUUM IMPREGNATION
minimizes starting wear of parts



Flat or curvilinear moving parts can be impregnated with Teflon to eliminate initial starting wear. Vacuum impregnation of the metal's pores with Teflon provides self-contained lubrication. Teflon is actually bonded into the metal as an integral part of it and will not bleed out under friction, heat, or pressure. In instances of light contact between parts, Teflon can function as the sole lubricant. The plastic impregnant is fungusproof and resists solvents, glycols, alcohol, salts, aromatic fuels, and other chemicals. Developed by **Western Sealant Co.**, 9999 W. Jefferson Blvd., Culver City, Calif.

For more details circle NED-915 M8 on enclosed inquiry slip

BRADY *Self-Sticking* QUIK-LABELS®



Leading coil manufacturers save time and money with Brady Quik-Label identification.

ANY SIZE! ANY SHAPE! ANY COLOR!

- Special Labels, Markers, Seals, Signs . . . tailor-made to your specifications. Mounted on Blue-Streak® Dispenser Cards for fast, distortion-free application.
- Choose from 400 different self-sticking materials — including Vinyl, "Mylar," Acetate films, Cellophane, Vinyl-Cloth, Glass Cloth, Aluminum Foil, and many more plastic films, cloths, papers and foils.
- Fast, low-cost marking; stick to metal, glass, wood or plastics. Write for Bulletin 132 giving complete details and case histories. Free Test Samples on request.

W. H. BRADY CO. 769 W. Glendale Ave., Milwaukee 9, Wis.

Manufacturers of Quality Self-Sticking Industrial Products.

Est. 1914 72

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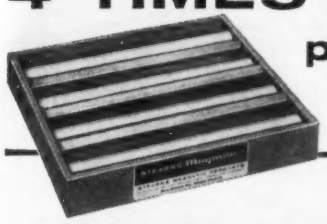
4 TIMES MORE protective surface!



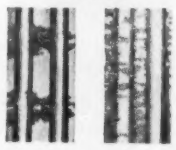
NEW Stearns Indox GRATE MAGNET

The new Stearns Indox Grate Magnet actually presents *4 times more collection surface* to remove tramp iron from free-flowing materials. Here's the secret: the magnetic collecting tubes have *continuous poles* along their entire length — no dead spots where iron particles can slip past (see comparative photos, below right).

Stearns Indox Grate Magnet is available in a wing type for hopper or floor installation, and a drawer type for closed chutes and ducts. Single or double-bank models, standard sizes to fit most requirements.

Write today for free literature on the new Stearns Indox Grate Magnet. Ask for Bulletin 1072-L.

TYPICAL COLLECTION PATTERNS



Ordinary Grate Magnet — Indox Grate Magnet

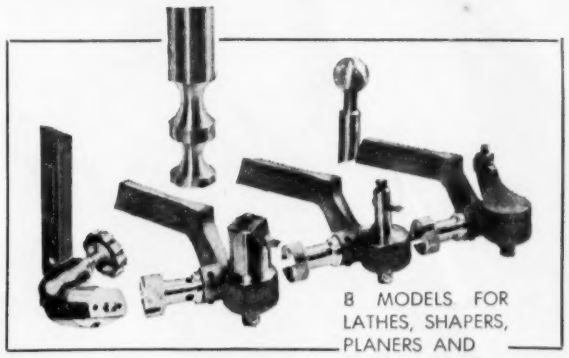
STEARNS MAGNETIC PRODUCTS

A DIVISION OF THE INDIANA STEEL PRODUCTS COMPANY

635 South 28th Street • Milwaukee 1, Wisconsin

For more details circle NED-917 M8 on enclosed inquiry slip

PRECISION SHAPLANE RADIUS TOOLS



8 MODELS FOR LATHES, SHAPERS, PLANERS AND BORING MILLS . . . .

Range: ⅜" to 3" for concave radii on lathes. Two sizes for convex radii (Balls up to 2½" dia.) on lathes. Also heavy duty model for radii to 6" on planers, etc.

Write for Circular *Patent Pending*

C. B. TEETER, TOOL ROOM SPECIALTIES

1221 W. Addison St., Chicago 13, Ill. Phone: DRexel 3-3571

For more details circle NED-918 M8 on enclosed inquiry slip

Flexrock Teflon* Packing no. 405

Constructed of fine Teflon fibers tightly braided over a resilient core of glass fiber and impregnated with Teflon. Flexrock 405 is an excellent chemical packing. It is especially recommended for use against concentrated acids such as sulphuric, nitric, sodium hydroxide; alkalies, etc. Flexrock 405 Teflon Packing has a maximum temperature range of 500°F., and comes in sizes of 3/16" to 1". Smaller sizes available with solid core.

*DuPont's trade name for tetrafluoroethylene

MAIL COUPON FOR FREE BROCHURE

FLEXROCK COMPANY
Mechanical Packing Division
3603 Filbert Street, Philadelphia 1, Penna.

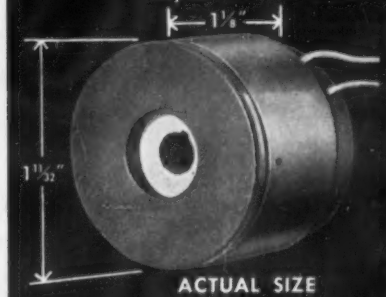
Please send additional information on Flexrock 405 and other Teflon Packings

Company _____
Address _____
City _____ State _____
Name _____ Title _____

For more details circle NED-919 M8 on enclosed inquiry slip

Stearns miniature electro-magnetic CLUTCH

Style "SM" — Size No. 2



Max. Torque 50 oz. in.
Weight — 5.2 oz.
Stationary Field
Plug-in Connections
Immediate Actuation
Rated Voltage 28 VDC — 5 watts

ACTUAL SIZE
Installation Proved

For Superior Performance . . . Specify Stearns!

For complete miniature data request
Bulletin No. 504-D
Stearns ELECTRIC CORPORATION
120 NORTH BROADWAY
MILWAUKEE 2, WISCONSIN

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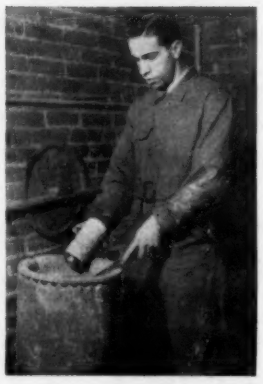
DROSS RECLAIMER



Recovery of 95% of tin, lead, zinc, cadmium or antimony may be had by use of Slago Dross Reclaimer, it is announced by this manufacturer in a current news release.

Slago is a newly improved formula, it is explained, that instantly on application dissolves the dross, leaving nothing but fine dirt. The formula contains spirits of metal which vitalize metal as dross is dissolved. The body of the metal is visibly improved; a clean silvery spider web appearance follows the washing action of Slago.

All non-ferrous metals show this visible improvement. The formula is especially effective in preventing tin burn out in high melting point babbitt and solders, increases fluidity and gives better pouring characteristics, it is further pointed out. Users of large melts will find no further need to sweeten metal when Slago is used, as stability is maintained. A special trial offer is made of 6-1 lb. shaker top cans of the dross reclaimer for $5.00, f.o.b. Philadelphia. **FARRELLOY COMPANY,** 1246 North 26th Street, Phila. 21, Penna.

HAVE YOU TRIED #1 ACID BRUSHES, 25% MORE HAIR, $3.30 PER GROSS, F.O.B. PHILADELPHIA. *(Advt.)*

For more details circle NED-921 M8 on enclosed inquiry slip

NEW! WATER IMPACT SAVES PLUMBING BILLS

Cleans Instantly Difficult Stoppages

Sewers ½" to 6" Diam.

SIMPLE TO OPERATE, THIS NEW GUN DELIVERS AN IMPACT WHICH INSTANTLY DISLODGES OBSTRUCTIONS. NO NEED TO REMOVE PIPE, GREASE TRAP, OR CROSS PIECE.

CHICAGO, Dec. 1st.—Just introduced is a Free Booklet on a New Discovery which enables the Janitor, Maintenance Man, or Home Owner to clean any clogged Sewer Drain.

Yet anyone can operate this new **Plumbers Flushing** Gun which releases air pressure on a solid shaft of water cleaning the most stubborn stoppages up to 200 feet. TOILETS, SINKS, URINALS, BATHTUBS, FLOOR DRAINS, and HOUSE - TO - STREET SEWERS clogged with Grease, Rags, Sand, Roots and paper melt away instantly when struck by the Hammer-like blow of this new unit.

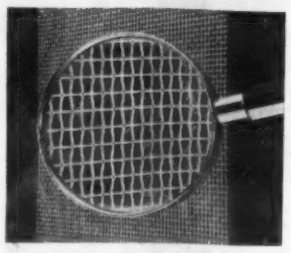
There is no need to remove wall or pipe, or Grease Trap. A special attachment allows water to flow from the faucet through the Gun while air is released on the pipe. Vents or stacks are no obstacle, as force tends to strike wherever the water lays. But now, what is this Plumbers Flushing Gun worth in **COSTLY PLUMBING BILLS SAVED?** Tear this Ad out now—and write your name and address beside it for **FREE BOOKLET.** Obey that urge. No Agent will call. A postcard will do (Chicago Phone KIldare 5-1702).

MILLER SEWER ROD COMPANY, DEPT., NE-12
4642 North Central Ave., Chicago 30, Illinois

For more details circle NED-922 M8 on enclosed inquiry slip

New Processes & Materials

BRAZED WIRE CLOTH withstands severe vibration



This industrial wire cloth is brazed after weaving to prevent shifting of the wires in installations where material is subjected to severe vibration. Currently produced size is this 8 x 8-mesh woven from 0.020-in. diameter T-304 stainless steel wire and copper brazed at each intersection. Rigid structural qualities result. Made by **Cambridge Wire Cloth Co.,** Cambridge, Md.

For more details circle NED-923 M8 on enclosed inquiry slip

THREAD COMPOUND retains homogenized consistency

Latest formulation of antiseizing thread compound retains its homogenized consistency indefinitely. It is nonsettling, nonskinning, and nonhardening in the can and provides effective lubricating and antiseizing properties at up to 1050° F. Compound is highly adherent, will not run out from vertical joints or under high heat exposure, and stays flexible inside of joints. It can be used on threaded pipe joints, bolt studs, and for coating gaskets. Compound is available in quart and half-pint cans. Made by **Crane Co.,** 836 S. Michigan Ave., Chicago 5, Ill.

For more details circle NED-924 M8 on enclosed inquiry slip

THREADED ROD & KEY STOCK of brass, steel in 12-in. lengths

Brass threaded rod, key stock squares, and steel threaded rod are now available in 12 in. lengths. Brass rod is offered in 6-32, 8-32, 10-32, 10-24, ¼-20, 5/16-18, and ⅜, and ½-in. sizes, zinc plated and with N.C. threads. Key stock squares are offered in 3/16, ¼, 5/16, ⅜, 7/16, and ½-in. sizes, all zinc-plated cold drawn steel. These 12-in. rods and stock squares are shown in a free standing counter easel which will fit snugly into the bottom of the regular Redi-Bolt floor display. Made by **Redi-Bolt, Inc.,** 5334 Indianapolis Blvd., East Chicago, Ind.

For more details circle NED-925 M8 on enclosed inquiry slip

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Optics for the space era . . . Satellite Scopes, Astronomical Telescopes, etc.

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Write for this amazing Catalog! You won't be sorry! 96 pages — hundreds of illustrations, charts, diagrams. A treasure-house of optical information . . . bargains galore. Optics for industry! Scopes for observing Satellites, Moon, Planets, Rockets. Optics for research labs, experimenters, hobbyists! Instruments for checking, measuring — to speed your work, improve your quality, cut your costs. We give you FACTS, no fluff. Tell you what it is — how it works — where it's used!

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For more details circle NED-926 M8 on enclosed inquiry slip

Black & Decker Portable Grinders

Take the tool to the work for finish grinding, removing burrs or wire brushing with a B&D 2½", 5" or 6" Portable Grinder. Designed for operator comfort—power-built for long, trouble-free life. Call your distributor for a demonstration or write: THE BLACK & DECKER MFG. CO., Dept. 1912, Towson 4, Md. (In Canada: Brockville, Ontario.)

Look Under "TOOLS-ELECTRIC" in Yellow Pages

Leading Distributors Everywhere Sell
Black & Decker®
Quality Electric Tools . . . Power-Built to set the pace

For more details circle NED-927 M8 on enclosed inquiry slip

COST US NOTHING!!

READ HOW MAGLINER MOBILE LOADING RAMP PAID FOR ITSELF IN JUST 4 MONTHS

PROBLEM—*A ground level plant, Millington Mfg. Co., Upper Sandusky, Ohio. Lack of dock facilities necessitated costly hand loading and prevented efficient in-plant material handling.*

SOLUTION—Incoming shipments are now unloaded by power trucks using a Magliner magnesium Mobile Loading Ramp. One man unloads a 20,000 lb. shipment in 20 minutes that formerly took 12 to 16 manhours. Company now receives materials in 1,000 lb. containers (formerly 50 lb. bags)—effecting extra savings in processing and feeding presses. In the words of the manufacturer, "Our Magliner paid for itself in 4 months." *Actually, cost us nothing!*

Do you have an older building . . need extra or movable dock facilities . . want to avoid costly hand loading? A Magliner Mobile Loading Ramp is the practical solution. A loading dock on wheels where you want it . when you want it! One man moves it.

Write for Bulletin DB-211
MAGLINE INC., P.O. Box 4212
PINCONNING, MICHIGAN

MagLiner MAGNESIUM
Mobile Loading Ramps

Canadian Factory Magline of Canada, Ltd., Renfrew, Ontario

For more details circle NED-928 M8 on enclosed inquiry slip

REPAIR FACTORY FLOORS

WITH THIS...

Repair broken factory floors without the usual traffic tie-up. Simply shovel INSTANT-USE into hole or rut — tamp smooth — truck over! No waiting! INSTANT-USE bonds tight to old concrete — right up to a feather edge. It's tough. Wears like iron. Won't crack or crumble. Install complete overlay where floors are badly chewed up. Used indoors or out. Immediate shipment!

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INSTANT-USE

FLEXROCK COMPANY (Offices in principal cities)
3603 Filbert St., Philadelphia 1, Pa.

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and Free INSTANT-USE BROCHURE—no obligation. (Clip and attach Coupon to Co. letterhead.)

Name .....
Title .....
Company .....
Address .....

For more details circle NED-929 M8 on enclosed inquiry slip